DOCUMENT RESUME

ED 419 735 SO 028 767

AUTHOR Wolinski, Arelene
TITLE Ancient Egypt: Personal Perspectives.
ISBN ISBN-1-57336-904-7
PUB DATE 1995-00-00
NOTE 93p.; The author teaches History 154 "The History of Ancient Egypt" at MDSA College, California.
AVAILABLE FROM Interaction Publishers, Inc., 1825 Gillespie Way, 101, El Cajon, CA 92020, telephone: 619-448-1474 ($15.95).
PUB TYPE Guides - Classroom - Learner (051) -- Guides - Classroom - Teacher (052)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS African Culture; African History; Arabs; Foreign Countries; *Middle Eastern History; *Middle Eastern Studies; Non Western Civilization; Secondary Education; Social Studies; *World History
IDENTIFIERS *Egypt

ABSTRACT

This teacher resource book provides information on ancient Egypt via short essays, photographs, maps, charts, and drawings. Egyptian social and religious life, including writing, art, architecture, and even the practice of mummification, is conveniently summarized for the teacher or other practitioner in a series of one to three page articles with occasional illustrations. (AA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 419 735

SO 028 767

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Ancient Egypt

Personal Perspectives

By Arelene E. Wolinski

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

PEG YOUNT

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Ancient Egypt

Personal Perspectives

By Arelene E. Wolinski

Maps and drawings by Jason Kessel
Photographs by Arelene Wolinski

This publication is protected by copyright and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise. For information regarding permission, write to the address below.

Published by Interaction Publishers, Inc.
1825 Gillespie Way, #101
El Cajon, California 92020
ISBN 1-57336-904-7
Copyright © 1995

Arelene E. Wolinski is a professor of history at Mesa College, San Diego, California. She has taught there since 1971. She has earned degrees from Queens College in New York City, CSU in Northridge, and UCLA. She has done post-graduate study at Harvard, Yale and UCSD on National Endowment for the Humanities grants, and has held two Fulbright grants: one to Pakistan for study-travel and another as an exchange professor to Hatfield Polytechnic in England.

She studied Egyptology at UCLA with Miriam Lichtheim, John Callender and Alexander Badawy, and archaeology with Marija Gimbutas.

"The Culture of Ancient Egypt," which was shown on KPBS-TV, toured several cities with the Tutankhamon exhibition. She wrote and appeared on the 40 half-hour series. She has taught History 154, the history of Ancient Egypt, at Mesa College since 1977.

At San Diego State University she has been a lecturer in the Department of Classics.

Her article about the ancient Egyptian use of animal masks by the priests of the animal cults was published in *Archaeology* magazine in January 1987 and in *Discussions in Egyptology*, December 1986 at Oxford, England.

TABLE OF CONTENTS

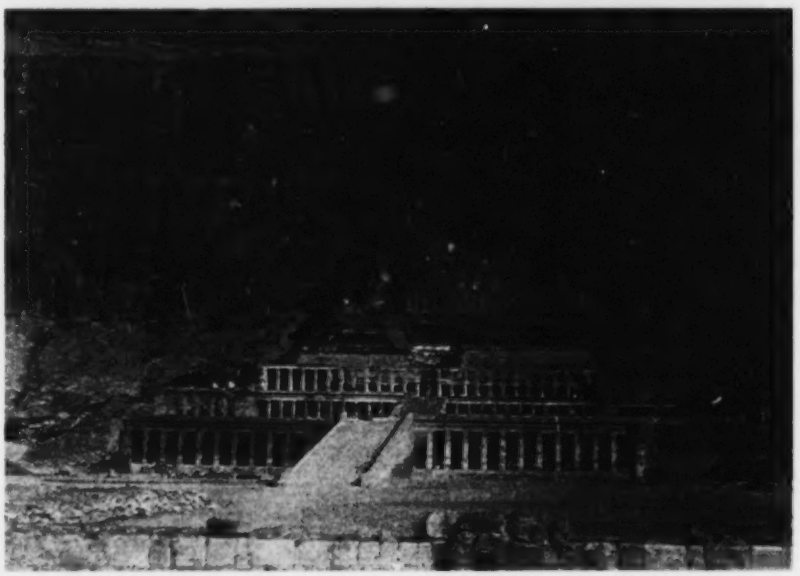
How We Know	1
Ancient Egyptian Chronology	2
Map: The Nile Valley	3
Geography	4
Were the Ancient Egyptians Black or White?	7
Predynastic Period	9
Where a Nation Began	10
The Old Kingdom	13
Faience	14
Beer in Ancient Egypt	15
The Rosetta Stone	16
Hieroglyphic Alphabet	18
Important Terms for Religion	19
Main Gods and Goddesses	20
Ancient Egyptian Creation Beliefs	21
Amulets	22
Some Aspects of Egyptian Religion	24
Precincts of Eternity	27
Ancient Egyptian Ceremonial Masks	30
Musings on the Word Mask	35
Egypt Is of Africa	36
Art	38
Pyramid Chronology	40
Pyramids at a Glance	41
The Pi Connection	42
Pyramids	43
Mummies	49
The Middle Kingdom	53
Women	54
Who Were the Hyksos?	55
The New Kingdom	57
Possible Genealogy 18th Dynasty	58
Hatshepsut	59
Maps: Egypt and the East	62
Ancient Egypt: Hurrians, Mitanni and Hittites	63
Egypt and the Mediterranean World	65
Akhenaten	68
New View of Nefertiti	69
Was Smenkhkare Nefertiti?	70
King Tutankhamon and DNA	72
Tutankhamon Curse Chronology	73
Silk in Ancient Egypt	74
New Kingdom Poetry	78
Ozymandias	79
Curses and Kisses	80
Victory Hymn of Merneptah or Israel Stela	81
The Later Dynasties	82
Kushites	84
Ptolemaic Egypt	85
Index	86

HOW WE KNOW

Although we have a vast collection of art objects and artifacts to fill many world class museums and large private collections, our precise information about ancient Egypt has many missing pieces. There are inscriptions on the interior and exterior walls of temples, tombs and monuments. And then there were piles of papyri which can be read but not fully understood. The ancient Egyptians were not writing for future historians, and, even if they were, they probably wouldn't have answered the questions we ask today. The scribes never wrote an essay on the role of women, nor life styles of the poor and penniless.

What we do have can be as overwhelming as the pyramids, but we still have no idea about how they were built. There are many large, impressive tombs, but they have been plundered. King Tutankhamon's was well stocked, but contained no documents to tell us about his parentage. We know a lot about amulets, but not a word about marriage ceremonies. What did they really think about the divinity of the pharaohs? Did people in Memphis have the same opinions as people in Thebes? What were their jokes? Perhaps we are reading them, but it's not our sense of humor, and so we are missing the jokes. Can we use our modern emotions to understand theirs?

Ancient travelers to Egypt were just as curious as we are today when visiting a foreign country, and they recorded their reactions to some of the same things that interest us today. It still surprises us that Herodotus, the Greek historian of around 450 B.C.E., was fascinated with the direction of the flow of the Nile and where the yearly flood came from. Festivals and animal worship interested him as much as it did Diodorus Siculus who visited Egypt 400 years later, and around 50 B.C.E. Strabo also commented about the crocodile cults which amazed him. We continue to be curious about animal mummies.



Hatshepsut's temple called Deir el Bahri near Thebes, 18th dynasty.

Bible readers all know about the stories of Joseph who was sold into slavery by his brothers, and of Moses abandoned by his mother in a basket in the Nile. Plutarch around 100 C.E. wrote *On Isis and Osiris* about ancient Egyptian religion. These books are still available to modern readers, and the stories are still marvelous.

We rely on written sources, archaeology and artistic evidence in order to reconstruct this remarkable civilization.

ANCIENT EGYPTIAN CHRONOLOGY
(simplified)

Neolithic	c. 6200-4400 B.C.E.*
Predynastic	c. 4400-3300 B.C.E.
Dynasty-O-(Zero)	c. 3200-3050 B.C.E.
Archaic Age or Early Dynastic	c. 3050-2700 B.C.E.
Dynasty 1, 2	
Old Kingdom	c. 2700-2180 B.C.E.
Dynasty 3 (2700-2610)	
Dynasty 4 (2610-2500)	
Dynasty 5, 6	
First Intermediate	c. 2180-2040 B.C.E.
Dynasty 7, 8, 9, 10	
Middle Kingdom	c. 2040-1785 B.C.E.
Dynasty 11, 12	
Second Intermediate	c. 1785-1570 B.C.E.
Dynasty 13, 14, 15, 16, 17	
Dynasty 15, 16 (Hyksos)	
New Kingdom	c. 1570-1080 B.C.E.
Dynasty 18 (1570-1320)	
Dynasty 19 (1320-1200)	
Dynasty 20 (1200-1080)	
Third Intermediate	c. 1080-730 B.C.E.
Dynasty 21, 22, 23, 24	
Late Period	c. 730-332 B.C.E.
Dynasty 25 (Kushite)	
Dynasty 26 (Saite)	
Dynasty 27 (Persian)	
Dynasty 28, 29, 30	
Ptolemaic	332-30 B.C.E.
Alexander (332-330)	
Roman	30 B.C.E.-305 C.E.
Byzantine (Coptic)	305-640 C.E.
Arab (Islamic)	c. 640 C.E.

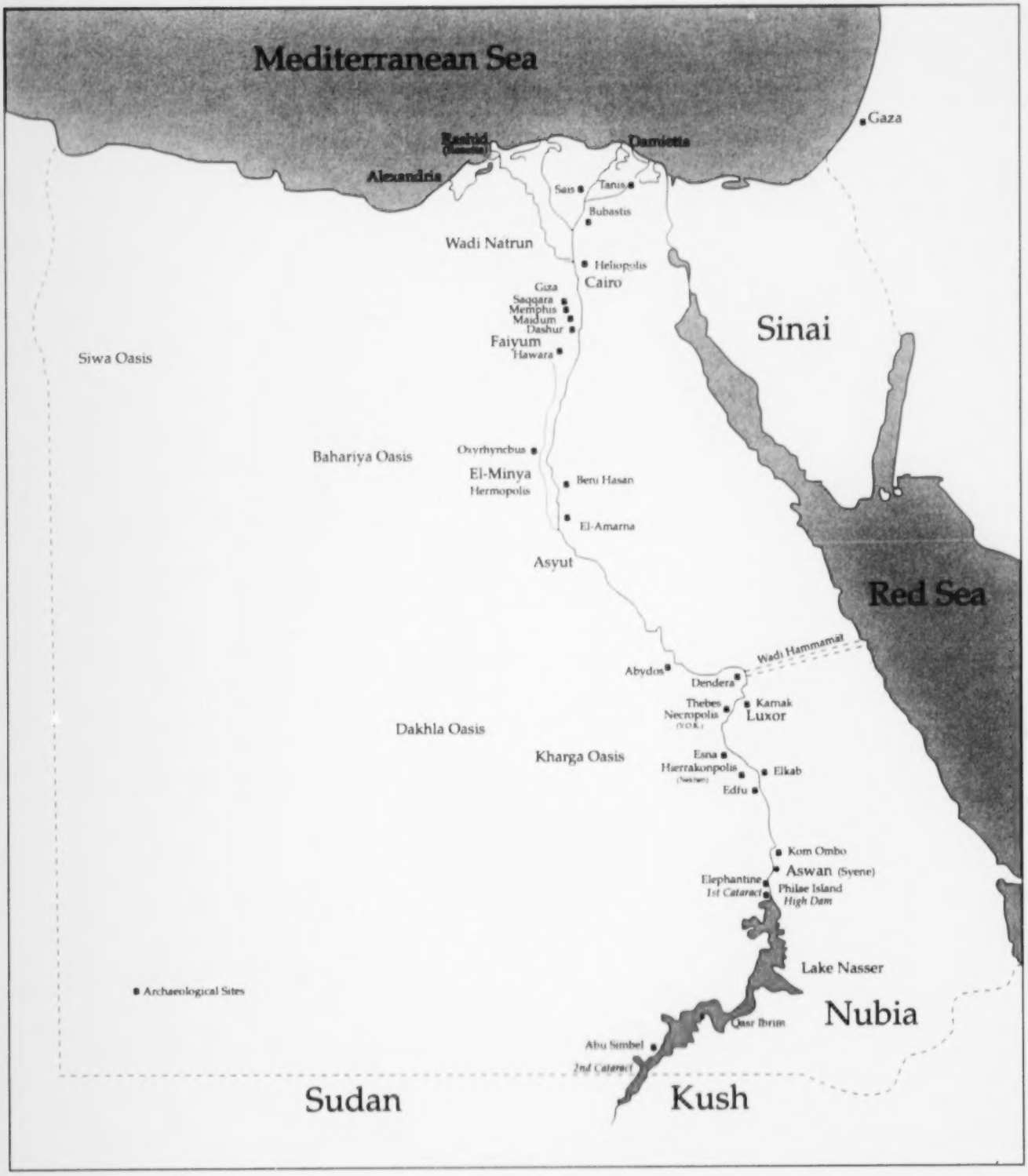
* Since B.C. means Before Christ and A.D. means *Anno Domini* or In the Year of the Lord, B.C.E. and C.E. were recently adopted for a multi-cultural world. B.C.E. means Before the Common Era and C.E. means Common Era. All of the dates are approximate and have been "rounded off" since there is disagreement among specialists of the precise dates and of the terminology for the groupings of dynasties. No ancient Egyptian ever said, "I live in the 18th dynasty in the New Kingdom."

Manetho, an ancient Egyptian priest-historian, put the history into dynastic order around 300 B.C.E. for the Macedonian Greeks then ruling Egypt. We do not know why he grouped the pharaohs into each dynasty.

Since he was writing for a Greek audience, he transliterated the hieroglyphic names into a Greek vocalization. Therefore, we have both Amenhotep (Egyptian) or Amenophis (Greek) for the same person. Sometimes a name was transmitted through a Hebrew or Roman source for further confusion. This is only the beginning of the spelling problems. Vowels are sprinkled for pronunciation.

Bibliography:
T.G.H. James, *An Introduction to Ancient Egypt*, 1979.
W. Murnane, *The Penguin Guide to Ancient Egypt*, 1983.
Metropolitan Museum of Art, *Time Line of Culture*, 1979.
S. Quirke, *Who Were the Pharaohs?* 1990.

THE NILE VALLEY



GEOGRAPHY

An "exotic" river is a geographer's term for a river which flows through a desert environment. Only a few inches of rain falls annually between Aswan and Cairo. Therefore, before the building of the Aswan High Dam in the 1960s, the area depended primarily on the annual inundation or flooding of the Nile Valley. The flood not only provided the water necessary for crops, animals and people, but also carried with it the nutrient rich silt which then carpeted the valley after the flood subsided. Additionally, this meant that the farmers did not have to continually move looking for fertile fields as their soil became depleted through constant use, as was true elsewhere. The inundation also helped prevent a salt build up in the soil, but did wash away wattle and daub (reed frames with mud plaster) houses built in their fields. The small houses had to be rebuilt, but luckily the inundation occurred during the summer months. In a sense, the river provided a yearly drastic house cleaning. It also washed away small rodents, and the snails which carried a parasite that caused a disease called "bilharzia."

During the flood the farmers moved onto the desert plateau on either side of the valley. This released workers from the farms who could be assigned to other projects, such as temple, tomb and pyramid building for about three months each year. Since all of the fields would need to be resurveyed after the annual flood to verify land size, a large group of skilled surveyors were also available when the valley was flooded. Obviously, every foot of alluvial soil was valuable, and land disputes were common. If the inundation was particularly high, then the cliffs on either side of the valley would crumble from erosion, so the surveyors needed a fixed point, probably the North Star, for their measurements. Thus the great accuracy in the alignment of Egyptian monuments was made possible.

The black new topsoil gave Egypt its ancient hieroglyphic name "KMT" or "Kemet" which meant the black land. Our modern word "chemist" or "alchemist" derives from the word for Egyptian since the prefix "al" means "the" in Arabic. In antiquity, Egyptians were famous in medicine, mathematics and sciences from the fame of the museum and library in Alexandria. Our name for Egypt comes from the Greek. The Arabic name for modern Egypt is "MSR" or "Misra" meaning "The Country."

The desert was, appropriately, called the Red Land or "DSHRT"; our word for desert comes from "deshret."

The Greek historian, Herodotus, traveled to Egypt around 450 B.C.E. and said, "Egypt is the gift of the river." He didn't need to name the Nile since no other could be meant.

The nilometer, the oldest known metering device, consists of a flight of enclosed steps built down next to the Nile in order to predict the amount or height of the water that there would be in the Nile flood (Akhet) during July, August, September and October. According to how high the water came up the steps on a particular day in early July, they could compare the level with previous records from that same date. This meant that the rulers could plan in advance which fields would receive how much water, and how many canals, reservoirs or dams would need to be dug to conserve or lead off the precious water. They had just the one chance each year to capture the flood water.

In order to know the date of the beginning of the inundation in Aswan, and to insure that the measurement was taken on the same date each year for consistency, they found that

the position in the sky of Sothis (Sirius or the Dog Star) was the clue. Since Sothis was a solar star, an early solar calendar was devised with a 365-day year consisting of 12 months with 30 days each plus five days yearly for celebrations. They were, of course, off by one quarter of a day each year which they eventually corrected.

When Julius Caesar went to Egypt, he understood the advantages of this solar calendar over the lunar calendar then used in Rome. A lunar calendar "loses" about 10 days each year and, therefore, the seasons become "wrong." Our modern calendar is ultimately based on the ancient Egyptian as brought to the west by Caesar (called the Julian calendar) and revised by Pope Gregory around 1582 C.E. (called the Gregorian calendar).

The Nile flows from south to north, "up the map," to the Mediterranean Sea. Its direction of flow was unusual enough for Herodotus to be curious about it. But, of course, the river flows "downhill" from the highlands of Uganda and Ethiopia towards the lowlands of the delta. So Upper Egypt is in the south and elevated, and Lower Egypt is in the north and, surprise, low.

The usual southern boundary of Egypt was at the first cataract or Aswan, about 700 miles south of the Mediterranean. A cataract is defined as an impediment in the water. In fact, it is the same term used for a cataract in the eyes. More simply, it was the rocks in the river which caused small waterfalls, rapids or "white water" and made sailing difficult. A cataract can be a mile long. From Khartoum, the capital of the modern Sudan, where the White Nile meets the Blue Nile to Aswan, there are six cataracts numbered from the north to the south, with the first at Aswan. Since these cataracts make navigation difficult, and since the banks of the Nile are rocky and surrounded by inhospitable deserts, surprise attacks from the south were rare.

The Nile Valley at the first cataract is less than a mile wide which is a partial reason why the Aswan High Dam was built there in the 1960s to control the annual flood and to provide hydroelectric power. Another reason was that the cliffs in the area were granite. Still today, you can visit the pink Aswan granite quarries where there is an unfinished obelisk in place. An obelisk is an upright four-sided pillar with a pointed top. Hieroglyphs praising the pharaoh were carved into the four sides. These were most common in the 18th dynasty with several between 95-100 feet tall. The Romans moved many to Rome and re-erected them. One is today in Vatican Square, others are in Istanbul, Paris, London and New York City.

At Aswan there are some important islands in the river: Elephantine with a nilometer and a garrison, Philae with famous temples to Isis and Hathor, and Sehel with many inscriptions. Dug into the western cliffs are tombs, some from the Old Kingdom, particularly Harkuf's with inscriptions recording four successful trading expeditions south to Nubia and telling about a dwarf he brought back for young King Pepi II of the 6th dynasty.

Nubia was the name given primarily to the area south of Aswan between the first and second cataracts. When Egypt was strong and united they annexed Nubia, but lost it during times of weakness. The area is now submerged under Lake Nasser which was created by the construction of the new Aswan High Dam. Many known and unknown archaeological sites were covered by the 300-mile-long lake. Among the monuments of Nubia which were rescued were the temples of Ramses II and Nefertari, his wife, at Abu Simbel; the many temples from the island of Philae which were moved to another higher island; the temple of Kalabsha transported north of the dam; and the small temple of Dendur moved to the Metropolitan Museum of Art in New York City.

Many Nubian villagers were moved north of the dam, but there are plans afoot to

relocate them back to Nubia. In Aswan the Nubian Cultural Center keeps their language, music, crafts and customs alive. They consider themselves a distinct population.

Usually the Kingdom of Kush indicates an area farther south between the third and sixth cataract with capitals at Napata and Meroe in the Sudan. It was not until the 25th dynasty that the Kushites ruled Egypt (about 750 B.C.E.).

The high cliffs on either side of the valley set east-west boundaries with a few exceptions of settlements in the oasis to the west and towns on the Red Sea. The Mediterranean Sea and the first cataract defined the north-south limits. The Sinai peninsula was considered part of Egypt from the earliest dynasties and was a source of copper and turquoise.

Gold was found on the Red Sea coast, and trade with Nubia was the other important source of this important commodity which represented the sun. Access from the Nile to the Red Sea coast was through Wadi Hammamat. A wadi is the Arabic word for a "wash," canyon or a narrow valley.

Regularly Egypt expanded to the northeast along the coast of what is today Gaza, Israel, Lebanon and parts of Syria.

To the west, predynastic materials have been found in the Faiyum—an agricultural oasis with a fresh water lake and a canal (Joseph's canal) linking it to the Nile.

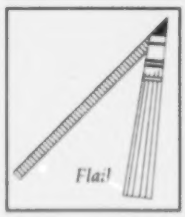
Two important vegetation symbols of Egypt were the lotus from Upper Egypt and the papyrus grown in Lower Egypt. They are often shown being knotted together by Hapi, god of the flooding, to indicate the unification of the two areas.

Lotus Papyrus

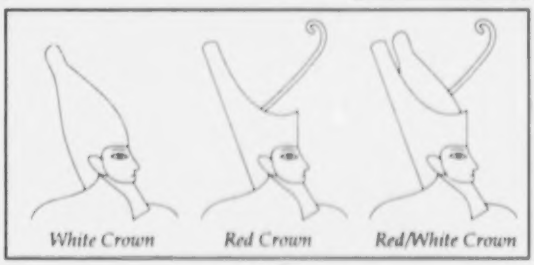
Vulture Cobra

The further emphasis on the importance of unification were the cobra (uraeus), representative of Lower Egypt, and the vulture (nekbet) of Upper Egypt. They are often combined on crowns and headdresses to distinguish the pharaoh. Another set of unification symbols were the crook of the shepherd—from the drier grazing lands of Upper Egypt—which was usually crossed on the chest of the pharaoh along with the flail of the farmer from Lower Egypt. Not only can these two represent the farmer and herdsman, but also the necessity of the pharaoh to protect his flock, and, sometimes, punish.

Crook


Flail

The Red Crown of Lower Egypt and the White Crown of Upper Egypt were worn separately or together to indicate the importance of unification in one more rendition.


White Crown Red Crown Red/White Crown

An understanding of the geographic, seasonal and heavenly dynamics is extremely important in the study of ancient Egypt since its inhabitants lived so much more closely in harmony with their environment than we experience in the modern world.

Bibliography:
Karl Butzer, *Early Hydraulic Civilization in Egypt*, 1976.
Herodotus, *Histories*, Book Two.
Herman Kees, *Ancient Egypt. A Cultural Topography*, 1961.
B. Trigger, Kemp, O'Connor and Lloyd, *Ancient Egypt: A Social History*, 1983.

WERE THE ANCIENT EGYPTIANS BLACK OR WHITE?

An advertisement in *The New York Times* (1995) stated:

1900 1,700 Negroes attend college.
1944 40,000 Colored People attend college.
1970 522,000 Blacks attend college.
1992 1,393,000 African Americans attend college.

These newspaper readers would have understood the "hidden" message. You would smile as you recognized the change in terminology over time, and you might, perhaps, wonder what the words and numbers would be in 2010. In addition, the square print was white, and the newspaper page solid black. For modern readers, there was even another meaning in contrast with the newsprint for the rest of the paper.

Two thousand years from now, if archaeologists discover this page of *The New York Times*, what will they think it meant to us? Could they have the same reactions to it as the reader in 1995? Will they think the references are to four different peoples? Even if they speak English in 3995, would they grasp the significance? I'm sure you can think of many more questions and problems, but, now, turn yourself around and ask how we view terms and references for 2000 B.C.E. There is no one alive today who can really understand the "hidden" messages in the hieroglyphs, art, images and context of ancient Egypt. With that understood, what is it we can know about color and its significance 4000 years ago?

First, we must acknowledge that Egypt is on the continent of Africa. The Nile Valley is an anchor to the south. That being said, we can also see that it is located in the most extreme northeastern part where there is a land bridge to western Asia. Therefore, the term for the language and population of ancient Egypt that we use today is "Afro-Asiatic."

The ancient Egyptian hieroglyphic name for the fertile Nile Valley was KMT which meant "the Black Land" which referred to the rich black alluvial soil from the inundation. This was usually contrasted with the name for the desert or "the Red Land," DSHRT. The word we pronounce Kemet was the name of the country.

Secondly, we do have actual mummies from as early as the fifth dynasty to study, but they show a variety of body types, hair textures and facial structures. For example, the grandparents of Nefertiti, Yuya and Tuya, are quite different facially from each other. Unfortunately, we do not have Nefertiti's mummy to determine what she actually looked like, and statues might not be accurate since artists are prone to flatter royalty who paid their salaries. But the variation in types can be seen in Harris' and Wente's *An X-Ray Atlas of the Royal Mummies*.

To be African or Egyptian in modern times does not distinguish the variety of skin colors, hair textures and body types from Cape Town to Cairo. Of course, invasions, colonialism and imperialism have all had an impact on Egypt but not all of it is modern. Today, the variety of skin tones in Egypt should not only be ascribed to the seventh century Arab invasions, the 18th-century French or the 19th-century British, but also throughout recorded antiquity. Nubians, Kushites, Hyksos, Mitanni, Hittites, Libyans, Assyrians, Persians, Macedonians, Greeks and Romans made marriage alliances. Sometimes friendly. Sometimes hostile.

Nubians were hired as mercenaries to fight in the armies of the First Intermediate, Middle Kingdom, 17th dynasty and New Kingdom periods. The Kushites (from the modern Sudan) ruled Egypt in the 25th dynasty. These peoples from the south were all mixed, not only with the indigenous population but with peoples from the northeast of Egypt from the modern countries of Syria, Turkey, Iran, Iraq, Israel and Lebanon.

During the Old Kingdom men are shown as reddish brown and women as pale ivory yellow. An excellent example is the statue from the fourth dynasty of Rahotep—who is reddish brown—and Nofret—who is pale ivory—shown in most art books. This is obviously an artistic convention. How could such a couple always produce dark sons and pale daughters? The usual answer is that "women stayed inside the house while men worked outside." Then would that make the standard skin color pale? We just don't know from artistic representations is the best answer.

During the New Kingdom we have many well preserved painted tomb walls to study. People seem to be shown more realistically with women even shown various dark shades. Where paint survives, a full range of skin colors are shown from pale ivory to deep black.

Foreigners are shown—in shades of brown and black—bearing gifts or trade items from Nubia, Kush and Punt in the south. From the northeast, Syrians, Mitanni and Hittites are often shown with horses, distinctive hair and clothing styles, and faces of various ivory, yellow and olive shades.

The ancient Egyptians were unaware of color prejudice according to Frank Snowden, a Howard University professor emeritus. In *Before Color Prejudice*, he stated that although Africans were depicted in art as a variety of color hues, the color, in itself, was no indication of class or status, but, rather, of reality. People of color were not considered as inferiors since in first encounters they were often warriors or rulers.

Martin Bernal has admitted that the title of his book *Black Athena* was originally *African Athena* which alters our perception of his argument about the origins of Greek cultivation.

There is no question that the population of Ancient Egypt was heterogeneous. That sentence is a comment on how much ancient history actually reflects modern opinions. In the early 20th century, Americans preferred the ancient Egyptians to be white. The late 20th-century Americans preferred them to be black, but, probably, the most accurate is that they were mixed, which currently might not satisfy anyone. Miscegenation, or race-mixing, until recently was illegal in many states. The 21st century will react differently. How?

Bibliography:
M. Bernal, *Black Athena*, 1987.
Brooklyn Museum, *Africa in Antiquity*, 1978.
James Harris and Kent Weeks, *X-Raying the Pharaohs*, 1973.
Harris and Wente, *An X-Ray Atlas of the Royal Mummies*, 1980.
Frank Snowden, *Before Color Prejudice*, 1983.
Frank Snowden, *Blacks in Antiquity*, 1970.
Frank Yurco, "Were the Ancient Egyptians Black or White?" *Biblical Archaeology Review*, September 1989. Also see: "Letters," in March 1990 issue.

PREDYNASTIC PERIOD

Terminology for this period is both fluid and precise, and it is often difficult to determine which is which. "Dynastic" refers to the introduction of hieroglyphs and the unification of Upper and Lower Egypt. The term neolithic means a time of the domestication of plants and animals, and so neolithic can be included in the predynastic period.

The list below is purely for name recognition. The dates overlap since the terminology is often for localized use and does not refer to Egypt as a whole.

Merimda Beni Salama — c. 4800-3700 B.C.E.
A delta neolithic site that continued into the predynastic age.
Used bone, leather, pottery, wove, fished, grew grain.

Badarian — c. 4500(?)-4000 B.C.E.
From Upper Egypt named for El-Badari.
Agriculturalists, livestock, fished. Flint sickles,
pottery of red and black ware, grave goods of
faience, ivory, figurines, cosmetics, jewelry, linen.
Trade for coral, shells to Red Sea; turquoise from
Sinai; cedar of Lebanon.

Amratian or Naqada I — c. 4000-3500 B.C.E.
Named for al-Amra. Links to Badarian, especially slate
palettes. More weapons, flints, mace heads;
copper for tools, needles, beads. Ivory figurines.
White on red pottery.

Gerzean or Naqada II — c. 3500-3300 B.C.E.
Named for el-Gerza. Stone vessels, ivory, slate
palettes, jewelry in graves.

Late Gerzean — c. 3300-3100 B.C.E.
Flint, painted pottery with many oared boats.

Proto-Dynastic or Naqada III or Dynasty Zero — c. 3150-3050 B.C.E.
King Scorpion named. Hard stone carved. Lapis lazuli.
Temples constructed. Nekhen or Hierakonpolis.

The excavations of M. Hoffman at Nekhen have shown a continuity of artifacts from predynastic to dynastic Egypt.

Bibliography:
M. Hoffman, *Egypt Before the Pharaohs*, 1979.
M. Hoffman, "Where Nations Began," *Science 83*, October 1983.
Metropolitan Museum of Art, *Time Line of Culture in the Nile Valley*, 1979.

WHERE A NATION BEGAN

Michael Hoffman made many remarkable discoveries excavating the predynastic site of Hierakonpolis. It was there that the English archaeologists Quibell and Green found the Narmer Palette in 1898. Narmer unified Upper and Lower Egypt, and with that event began the First dynasty. Narmer's name, Catfish, is at the top of both sides of the palette, and on one side he wears the White Crown of Upper Egypt; on the other side he wears the Red Crown of Lower Egypt. The "Two Lands," called "Tawy," had important political implications. This unification coincided with the introduction of hieroglyphs, increased trade and new forms of art and architecture.

The question arises: "Why?" A traditional answer has been: "Outside influences from Mesopotamia." The answer was given because the Sumerian city-states, in the modern country of southern Iraq, had already begun to use cuneiform script and to settle in cities. These two civilizations compete in history books for primacy.

Hoffman's discoveries show that Egyptian civilization did not need external influence, but showed a continuous indigenous development without evidence of foreign intrusion. Predynastic Egypt did not need outside stimulation to develop the world's oldest known unified state, hieroglyphs or unique burial customs. Hoffman claimed that the area around Hierakonpolis was the largest predynastic settlement in all of Egypt, and that the social, political and economic situation around 3800 B.C.E. led to systematic development which culminated around the time of Narmer in 3000 B.C.E.

Hierakonpolis was the "City of the Sacred Hawk" in Greek or Nekhen in Egyptian.

The location was slightly inland in the desert and above the fertile flood plain which was not yet crossed with irrigation ditches. There was light seasonal rain and access to the river. Some trees grew in the wadi (a wash) near the settlement. Space was provided for housing, commercial and industrial activities, farms, a garbage dump and a cemetery. Houses were usually made of wattle and daub (reed frames with mud plaster) with floors dug below ground level.

The site was dated by the pottery discovered in houses and in the necropolis. One of the graves was about eight feet long, five feet wide and almost six feet deep. Although the grave had been looted, some Amratian pottery, fragments of wood, mats and leather braided rope were found. The markings on pottery looked to Hoffman like primitive hieroglyphs. "Clearly we were dealing with the remains of a people more advanced than Egyptologists used to think," commented Hoffman in 1983. He theorized that this was a settlement with social stratification and an elite class. He was justified when a polished green and white stone macehead was discovered. Maceheads symbolized political authority. In 1898 Quibell and Green found a macehead with the name Scorpion on it. Scorpion is either ascribed to Dynasty Zero or the Proto-Dynastic period. The macehead found by Hoffman at the same site is about 500 years older than Scorpion's.

Hoffman was curious about why this particular predynastic place prospered. Other locations had some of the same advantages, but here was a much larger population. What did they do? From the more than 50 million pieces of broken pottery, Hoffman concluded that they were potters. His crew located about 15 Amratian kilns. The coarse pottery was probably for everyday use, and the finer pieces for gravegoods.

All the kilns that produced the better quality pottery were found in an area where the winds could fan the furnaces producing a hotter temperature to fire finer ceramics. It was

estimated that more pots were produced than were needed locally, so they were probably traded along the river. This trade was the basis of their wealth. Did the kiln owners or merchants help encourage a belief in the afterlife for profit?

As the Nile Valley became more arid around 3500 B.C.E., people moved closer to the river, leaving the kilns behind. The sands drifted over them for 5500 years until an American crew from the University of South Carolina dug this site.

A botanist studied the ashes in the kilns and recognized acacia and tamarisk wood. These trees grew nearby at one time, but they were cut down to fuel the furnaces. In addition, overgrazing of sheep and goats was determined by the hundreds of bones that were uncovered. Then the rains stopped. Had the pottery industry caused environmental changes?

When we try to reconstruct what happened next, one story emerges. The certainly wealthy kiln owners of Nekhen must have gradually moved closer to the river, built new houses, walls, temples and larger tombs. Prehistorians trace the origins of irrigation canals to this time. The power of the upper classes would have been strengthened because governmental centralization was required for water control.

Archaeological finds in the next period, the Gerzean, indicate increased wealth, warfare and crowns which will later symbolize royalty. For about one hundred years, between 3200-3100 B.C.E., localized kinglets controlled certain important regions around Memphis, Abydos, Naqada, Aswan and Nekhen. They fought continually for control of adjacent kingdoms until Narmer finally managed to defeat all his rivals.

It was during this Proto-Dynastic period that the leaders of Nekhen returned to the old cemetery of their ancestors to build new tombs of mudbrick in groups of three to five. Possibly these multiple tombs around a courtyard were for family, employees and friends. These tombs are about twice the size of the earlier Gerzean and Amratian periods. One was 16 feet long and eight feet wide. A bed's two legs, carved in the shape of a bull's, were made of sycamore. Hoffman claimed they reminded him of Tutankhamon's animal-footed wooden furniture. That would be more than 1500 years apart!

Until this careful archaeological excavation, we were unaware of the continuity in burial building. Although not of the same complexity as pyramids, large wooden structures were built over the tombs. Brown circular discolorations indicated that round posts were dug into the earth and then rotted. Buildings and fences surrounded the tombs. We usually refer to a cemetery as a necropolis, or city of the dead; perhaps we are closer to the truth than we expected. Reed fences, similar to those still seen in rural Egypt today, surrounded the wooden shrines or model houses on top of the tomb. Five hundred years later King Zoser of the third dynasty built the first monumental stone structure at Saqqara. An inside chamber was lined with faience walls in the design of bundled reeds. Was this motif a continuity from the Proto-Dynastic age?

Animal tombs for an elephant, hippopotamus, crocodile, baboon, cattle, sheep and dogs were a surprise. Some animals were mummified. A bull, cow and calf were in one tomb. What could that mean? In historic times, animals were closely related to the gods. How early were they worshipped? Animals are shown on top of the nome (province) standards. What are the political and religious associations?

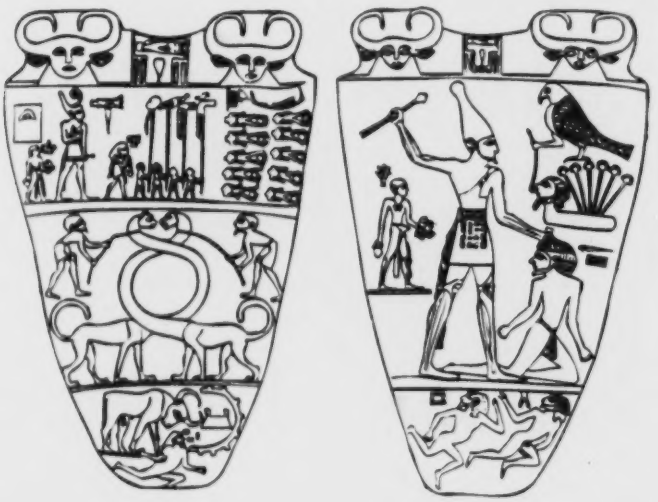
Hoffman came to several conclusions. One is that the cemetery at Nekhen showed that later traditions were established there. Power was centered on the royal cemeteries and not on great walled cities or palaces. Divine kings with a Horus-name evolved from the wealthy

elites and successful pottery traders of Nekhen to create a great nation state which survived several thousand years. Trade and culture unified the Egyptians several hundred years before the political process was evident.

What is most impressive is the continuity from the predynastic to the dynastic age.

Bibliography:
Michael Hoffman, *Egypt Before the Pharaohs*, 1979.
Michael Hoffman, "Where Nations Began," *Science 83*, October 1983.

THE NARMER PALETTE



Verso *Recto*

Two English archaeologists, Quibell and Green, discovered the Narmer Palette in 1898 at Hierakonpolis ("City of the Sacred Falcon" in Greek) or Nekhen, but documentation concerning its exact location is missing.

A palette was used for mixing makeup, especially for the eyes (kohl, antimony) on the verso in the depression created by the twisted long necks of the animals. It was held in the same way as an artist's palette. The two sides of the palette are shown here side-by-side for comparison.

The meanings of the many motifs are much analyzed with various conclusions. This palette is usually considered to represent the beginning of the unification of Upper and Lower Egypt by the single ruler, Narmer, whose name is in the square, "serekh," between the two horned faces (bovines with human faces). The cat fish and chisel in the serekh is the Horus-name of the king, and he is shown wearing the Red Crown of Lower Egypt (delta) on the verso, and the White Crown of Upper Egypt on the recto.

Which area was he from?

Bibliography:
W. Emery, *Archaic Egypt*, 1961.
W. Fairservis, "A Revised View of the Narmer Palette," *JARCE*, 1991.

THE OLD KINGDOM

The earliest dynasties established a firm foundation for the Old Kingdom. In the prior period, often called the Archaic Age, rulers used several names; importation of cedar from Lebanon began; use of copper from the Sinai increased; pen, ink and papyrus were used; irrigation ditches were organized; obsidian was carved; stone jars were utilized; lapis lazuli was appreciated; Horus' name was used; and the Red Crown and the White Crown were worn. By the beginning of the third dynasty, Egypt had a secure southern frontier at the first cataract, formalized hieroglyphs, an efficient bureaucracy, centralized power of the god-king, stone work and agreed-upon artistic conventions. It is quite possible that the organization required to build the massive stone-stepped pyramid of Zoser's at Saqqara consolidated a regular work force from the farmers, and it solidified the power of the king.

The Old Kingdom's capital was Memphis, and the worship of the sun god, Ra, of Heliopolis, grew. Overall, the kings of the period brought peace and prosperity to Egypt for about 500 years (c. 2700-2180). Several kings are very famous from this period. Senefru campaigned in Nubia as far south as Buhen which is between the first and second cataracts, and he built pyramids at Dashur. Unas (Wenis) is best known because the earliest known pyramid texts are on the tomb walls of his fifth dynasty much-ruined pyramid mound. All was not smooth for these dynasties, and there were internal difficulties in the succession. Economic difficulties are obvious from the declining quality of the pyramids, and political decentralization becomes evident to us when nome (province) governors had their tombs built in their home nomes rather than snuggled close to the tombs of the kings.

Whatever weakened the kings of the sixth dynasty culminated in the too-long reign of Pepi II. What a descriptive name for a king who ruled for more than 90 years from about 2278 to 2184. He came to the throne as a child and probably led an all too pampered life. Perhaps he outlived everyone in his family since a woman, Neith Aqert, ends the dynasty and the period. The next four dynasties are called the First Intermediate. Intermediate always means confusion, and more than one man claimed the throne.

THE PHARAOH HAD FIVE NAMES

"He who speaks the name of the dead causes him to live again; it gives breath to he who has vanished."

In the quest for immortality, your name was extremely important, and so it was chiseled in stone to last forever—unless an enemy erased your name in order to permanently kill you. Or worse, replace your name with his!

A king was named at birth. At his coronation he received four more names in a complicated ceremony which separated him from mere mortals. This tradition of taking more than one name began around the 4th dynasty and continued to expand until all five titles were used by the 12th dynasty. In the 4th dynasty, King Senefru surrounded his throne name with the oval which the French called a cartouche.

The five names were: 1. birth name, 2. throne name, 3. Horus name. 4. golden Horus name 5. Nebti name or The Two Ladies (two goddesses represented by a cobra and vulture). It was rare that the five names appear at one time except at the coronation. Gold represented the skin of the gods, and the title "The Golden Horus" was important.

Bibliography:
S. Quirke, *Who Were The Pharaohs?* 1990.
Trigger, Kemp, O'Connor, Lloyd, *Ancient Egypt, A Social History*, 1983.

FAIENCE

The term faience for a self-glazing, blue ceramic the ancient Egyptians made is misnamed since the term referred to a tin-glazed clay ceramic made in northern Italy. It is none of these. J. V. Noble defined faience as: "A white, coarse, gritty and granular core material covered with a lustrous blue glaze" (Noble, 1969, 435). Some sources call faience "frit" or "paste." The surface becomes like glass.

Faience beads and small pieces are found in predynastic sites dating from near the end of the fifth millennium (4300 B.C.E.). Only rarely are large items made of faience, but usually small amulets, rings, beads, bracelets, jars, bowls and ushabti are found.

Since faience resembles the semiprecious stone lapis lazuli, it was a valuable trade item. The color intensity varied with the richness of the times. The best quality color was found during the 12th, 18th and 19th dynasties, and, again, around 1000 B.C.E. Noble gives the "standard" formula for faience:

Feldspar (ground)	40 grams
Flint (ground)	20 grams
Fine white sand (ground)	8 grams
Sodium carbonate (salt)	6 grams
Sodium bicarbonate (baking soda) (natron)	6 grams
Whiting	5 grams
Bentonite	2 grams
Copper oxide	3 grams

Mix with a little water and knead. If it is too wet, then it will slump. Usually it was pressed into clay (terra cotta) molds rather than shaped with the fingers. It was left in the mold just to form the piece. It next was removed to dry in the air. The carbonate compound with the copper rises to the surface (capillary action) and forms a white powdery layer as it dries. After it is dry, it is fired at an oxidizing atmosphere at 950°C. The surface powder fuses to a glaze or glass or siliceous exterior. The copper oxide acts as a coloring agent and turns the surface a lustrous blue while the center white core becomes hard.

The materials were easy to acquire locally, and it was a single-step process. Other colors could be made by using iron oxide for yellow, manganese for purple and a mixture of copper and iron oxide for green.

Beads or other hollow-core objects could be made by putting a combustible material, like grain, inside which burned during firing and disappeared.

Another technique was often used for making carved scarabs and other amulets that looked like hard stone. Steatite (talc or chalk) is a soft mineral found in Egypt. On a hardness scale of one to 10, it is a one. It is extremely easy to carve, then glazed with faience, and dried before firing at 950°C. There's an unusual result: the object becomes harder than the original! It has a hardness of 3.5.

Some of the jewelry of King Tutankhamon, in the 18th dynasty, were originally identified as having lapis lazuli inlays, but it has since been found to be high-quality faience. They were making pseudo—or faux—jewelry 3300 years ago.

Bibliography:

C. Kiefer and A. Allibert, "Pharaonic Blue Ceramics, the Process of Self-Glazing," *Archaeology*, April 1971.
A. Lucas and J. Harris, *Ancient Egyptian Materials and Industries*, 1962.
J. V. Noble, "The Technique of Egyptian Faience," *American Journal of Archaeology*, October 1969.

BEER IN ANCIENT EGYPT

The ancient Egyptians buried beer in jars with the dead in tombs and graves to assure they wouldn't become thirsty on their journey into the next world. Some dead pharaohs and wealthy people buried entire miniature breweries and small figurines of brewers to insure daily supplies of beer for eternity. For all classes and ages, beer was the national drink. It was imbibed in homes, in taverns, on boats and, symbolically, in tombs.

They called beer "hek" or "haqa." Possibly our modern word "hiccup" comes from it.

The beer was a sweet barley-based brew fermented from bread crumbs. Beer was made in a part of the kitchen called "pure." It was made from loaves of bread that were only baked on the outside. The bread was then crumbled into a large vat and mixed with a date liquid. After it was stirred, strained and fermented, it was poured into jars and sealed.

An ancient Roman writer of the first century A.D., Columella, said that Egyptians added pungent herbs and lupine to their sweet beer, but other sources suggest that the hoplike bitter herb was served as a snack with the beer rather than in it. There were spells to say so that beer would not sour or go flat.

Women usually brewed beer since it was considered a kitchen chore. Men were the "little old winemakers" since that was considered more energetic and outdoor work during the crushing. The wine was red and sweet during the Old Kingdom. From the Middle Kingdom white wines became more popular.

The Ebers Medical Papyrus usually recommended that medicine should be mixed with beer. Nearly 100 prescriptions, of about 700, required beer.

Several papyri warn about the troubles an excess of beer could cause and ruin a young man's life. The dangers of drunkenness were a concern even then. A father lamented, "I am told that you neglect your studies, have a desire for enjoyments and go from tavern to tavern."

Even the goddess Hathor got drunk. According to myth, the sun god, Ra, thought that the gods and humans were plotting against him. He called on Hathor to punish humans for him. She began to kill people and, in the process, acquired a taste for blood.

Ra realized that Hathor (now called Sekhmet) was killing everyone, whereas he only wanted to teach them a lesson. On the morning of the day Hathor planned her complete destruction of all humans, Ra mixed a red pigment (or dye) with beer and poured it over the fields. Hathor arrived, saw her reflection and drank what she thought was human blood. She became so drunk that she fell asleep, forgetting about her task. A celebration in honor of Hathor required many jars of beer. I wonder if it was colored red?

Bibliography:

Alan Eames, "Beer in Ancient Egypt," *All About Beer*, August 1987.
A. Erman, *Life in Ancient Egypt*, 1994 and 1971.
P. Montet, *Everyday Life in Egypt*, 1958 and 1981.
B. Watterson, *The Gods of Ancient Egypt*, 1984.

THE ROSETTA STONE

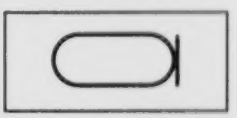
The decipherment of hieroglyphs was achieved by Jean François Champollion in 1822. The key was a basalt stone measuring nearly four feet long by 2-1/2 feet wide and 11 inches thick, which was found at Rashid (Rosetta) in the western delta during the construction of a fort while Napoleon was in Egypt in 1799. The stone was immediately recognized as important by the scholars or savants accompanying the expedition. It was acquired by the British in the Treaty of Alexandria (1801), arriving in London in 1802. It can now be seen in the British Museum in London.

The top part of it is in hieroglyphs or "sacred carvings," a term used by Clement of Alexandria (150-215 C.E.). Since these looked like pictures, many fantasy translations were attempted in later periods.

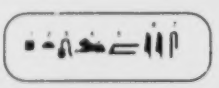
The middle section's script was called demotic by the ancient Greek historian, Herodotus, who traveled to Egypt around 450 B.C.E. The term is related to our word "democracy" in that it was assumed to be the writing of the people or "demos." The demotic was found to be a cursive script, usually in ink on papyrus, which developed in the later period and almost always used for secular records. A not-very-good example would be that hieroglyphs are like our fancy Gothic letters in comparison with demotic which is like handwriting using abbreviations. Champollion continued the usage of these terms.

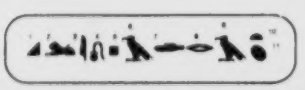
The bottom portion was immediately readable by classical scholars since the ancient Greek was never "lost." The stela, more or less the size of a tombstone, was inscribed for Ptolemy V Epiphanes (205-180 B.C.E.) in the ninth year of his reign (27 March 196 B.C.E.).

There are two languages, Egyptian and Greek, and so is bilingual, but triscriptural since it has three scripts: hieroglyphs, demotic and Greek.



Before Champollion, others had noticed ovals with hieroglyphs inside. It was thought by Dr. Thomas Young that the ovals or cartouches contained the name of Ptolemy. Champollion's knowledge of many languages helped him to understand that often the same sounds might be written with different letters. This was important when the name Cleopatra was found in a cartouche on an obelisk base brought to England and seen by Champollion. This Cleopatra, the wife and sister of Ptolemy V (not the famous Cleopatra VII of movie fame), had many letters in her name in common with Ptolemy's with the exception of the "t" which was written differently:

P-T-O-L-E-M-Y-S 

K-L-E-O-P-A-T-R-A 

An example of this variation in Greek is "O" for "omicron," and "Ω" for "omega." Champollion worked his way through the Greek and Latin names of the rulers and then recognized the names of pharaohs Tutmose and Ramesses.

Hieroglyphs were used from about 3100 B.C.E. until the last known inscription on Philae island in 394 C.E. More than 3500 years of use meant some changes and variations. The signs are primarily consonants, but some vowels were added in the later period. There is a combination of phonetic symbols and pictographs. A good example is the English word "rose" since it could mean a flower, name, color, wine or the verb to rise. An Egyptian

would have added an appropriate picture called a determinative to avoid confusion. This picture was not pronounced. It only indicated which meaning to read.

There were also ideograms such as ☉ for "sun." Similarly, in English we might write "I ♥ you," and know how to say it. Some signs were for two consonants such as ▭ for "PR." Again, an example from the Greek is "theta" ø for "th." There are three letter signs 𓉔 for "HTP." Usually the letter **"e"** is filled in to pronounce it: "Hetep" or "Hotep." This means that there is much variation when we transliterate hieroglyphs into English words.

A convenient example is the name of the god: Amen, Amon, Amoun or Amun.

In addition, there is always the choice between using the spelling from the classical Greek and Roman authors such as Cheops, Chephren and Mycerinus, or the spelling as a result of the decipherment since 1822 of Khufu, Khefre and Men-Kau-Ra.

Hieroglyphs were written from right to left or left to right, horizontally or vertically. They are read "facing" the animal or bird or person. Hieratic and demotic are written from right to left as are modern Arabic and Hebrew. Usually both are written in ink on papyrus. Hieratic is another script from the Greek word for "priestly." In the Ptolemaic period it was used for religious texts, although it was earlier used for other documents, too.

Papyrus was probably a royal monopoly. The plant grew in the marshes along the Nile. After stripping off the green outer rind, the pulp was soaked, layered and squeezed until the natural adhesive in the plant stuck layers of it together. Before writing on it, the papyrus was smoothed with a burnisher such as the kind found in King Tutankhamon's tomb. Ink was usually black, made from carbon, and red ink was made from ochre.

Schooling for scribes was difficult, but was considered a privilege. Fathers urged their sons to study hard since the alternative was sweating under the sun working in the fields.

Thoth was the god of writing. He is usually shown as an ibis or priest with an ibis mask holding a writing palette and pen in his hands. Working. Thoth is sometimes shown as a baboon.

The vertical cartouche belongs to Ramses II, also called User-Ma'at Ra. The goddess Ma'at is seated holding a staff which is the hieroglyph "usr" meaning "power." The sun is at the top.

So what did the Rosetta Stone say? Ptolemy says he conferred great benefits on the priests and promised taxes for the maintenance of the temples, lowered taxes and repaired irrigation canals. Have politicians changed? They'll expand benefits and lower taxes! The inscription also orders that a gilded wooden statue of the king and copies of the stone be placed in each temple.

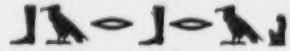
Bibliography:
Alan Gardiner, *Egypt of the Pharaohs*, 1961.
D. Thompson, *Memphis Under the Ptolemies*, 1988.
K. T. Zauzich, *Hieroglyphs Without Mystery*, 1994.

HIEROGLYPHIC ALPHABET

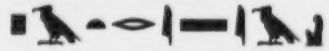
Sign	Object Pictured	Approximate sound equivalent
	vulture	a as in *ah*
	reed leaf	i
	double reed leaf	y
	quail chick, bird	w
	foot	b
	stool	p
	horned viper	f
	owl	m
	water	n
	mouth	r
	shelter	h
	twisted rope	hard h
	placenta	ch as in Scottish *loch*
	folded cloth	s
	pool	sh
	hill slope	k or qu as in *queen*
	stand for jar	hard g as in goat
	loaf	t
	tethered rope	th
	hand	d
	snake	soft g as in gem
	lion	l
	basket with handle	k

Elisabeth

Dorothy

Barbara 

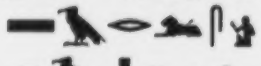
Mary

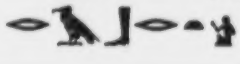
Patricia 

Richard

George

William

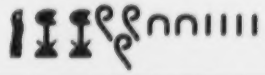
Charles 

Robert 

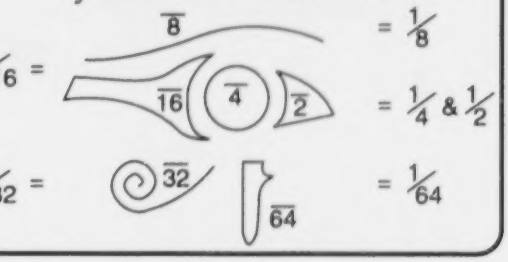
Numbers:

= 32

= 612

 = 12,324

Symbols for fractions:



Bibliography:
R. Gillings, *Mathematics in the Time of the Pharaohs*, 1972.
K. T. Zauzich, *Hieroglyphs Without Mystery*, 1994.

IMPORTANT TERMS FOR RELIGION

Polytheism	The worship or recognition of many gods.
Monotheism	The belief in just one god.
Henotheism	A belief in many gods, but recognizes that one is supreme or "first."
Theocracy	A governmental system where god (or priests) rule.
Syncretism	A merging or combining of gods or religious practices.
Memphite Theology	Creation by the god Ptah by "the word."

Akh	A "spirit" of the dead which lives in the next world. A term used when the ba united with the mummy.
Ka	The "second self." In the afterlife it ensured the deceased's survival.
Ba	Traditionally, the "spirit" or "soul." The ba is usually shown as a "ba-bird" and is able to move freely between this world and the next. Perhaps a conscience. It had eternal existence.
Book of the Dead	*Coming Forth Into Day.* It is a collection of spells from the Pyramid Texts to the Coffin Texts to those written on papyrus which helped the deceased pass safely into the next world.
Weighing of Heart	A ritual performed by "weighing" the deceased's heart in a balance scale opposite Ma'at's feather. If it weighted "light," then you were escorted to the next world of Osiris; if not, then the heart was fed to the monster, Ammit, and you did not proceed to an afterlife.
Cenotaph	A memorial tomb in addition to the actual one.
Ushabti	A worker statue placed in the tomb which could magically come to life and work for you when called. Sometimes called a shawabti.
Naos	A shrine in which divine statues were kept, or a temple's sanctuary.
Necropolis	A cemetery.

Bibliography:
C. Andrews, *Egyptian Mummies*, 1984.
R.T. Clark, *Myth and Symbol in Ancient Egypt*, 1959.
Anthony Mercatante, *Who's Who in Egyptian Mythology*, 1978.
Stephen Quirke, *Ancient Egyptian Religion*, 1992.
Barbara Watterson, *The Gods of Ancient Egypt*, 1984.

MAIN GODS AND GODDESSES

Ra or Re	Sun. Often combined with other gods; syncretism.
Atum	All within himself. Creation god.
Amon	Sun and "hidden." Often Amon-Ra.
Aten	Sun and the disc shown with rays ending in hands.
Osiris	Next world and the dead. Shown as a mummy.
Isis	Wife of Osiris. Mother's love of Horus. Associated with Sothis.
Horus	The living pharaoh. The sky and the hawk or falcon.
Anubis	Jackal. Necropolis. The priests of mummification.
Thoth	Scribe. Wisdom. An ibis or baboon. Moon.
Ptah	Creator. Craftsman. Memphis.
Hathor	Cow. Merriment and dance. Intoxication. Dendera.
Neith	Nourisher. Archaic war goddess. Weaving.
Nepthys	Darkness, decay, death. Wife of Seth.
Apis	Mighty bull. Serapeum.
Tuart	Pregnancy. Hippopotamus.
Bast	Domestic cat. Dance. Music. Bubastis.
Sobek	Crocodile. The inundation. Kom Ombo.
Ma'at	Balance, harmony, correctness, justice. A feather.
Sekhmet	Lioness. War and destruction.
Selket	Magic. Cures scorpion bites.
Hapi	The Nile. Pendulous breasts.
Khnum	The potter. A ram.
Nut	The sky. Gives birth to the sun daily.
Nekhbet	Vulture of Upper Egypt. Brought forth light.
Uraeus	Cobra. Lower Egypt.
Khonsu	Moon.
Bes	Children. Dwarf. Art, music, war, strangler.
Geb	The earth's surface.
Min	Male potency. Fertility. Erect phallus.
Seth	Disorder, chaos, darkness, impotence, desert, drought, perversity, some times evil. Opposition. A boar? Can change form. Brother of Osiris.

ANCIENT EGYPTIAN CREATION BELIEFS

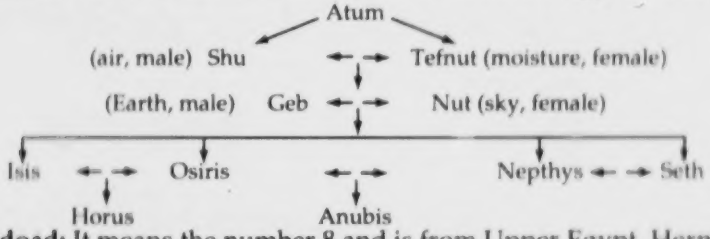
"Every important shrine in Egypt seems to have had its creation mound, recognized as the Place of Creation ...." (Wilson, *The Culture of Ancient Egypt*, 58).

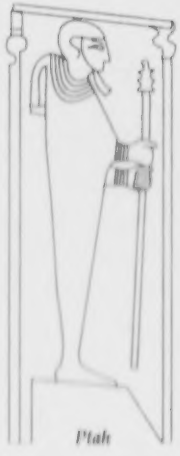
There were many beliefs, each held locally, and the one term we can use is *inconsistent*. There was no attempt to reconcile or organize them.

As a generalization, the ancient Egyptians were interested in the "who" and not the "why." They wanted a "you-me" relationship and not a "me-it." They did not think in terms of "impersonal causations" (science).

The following are just a few of their creation beliefs in no particular order:

1. **From the Pyramid Texts:** Fifth dynasty in pyramid of Unas. Atum can mean "All within himself" (Wilson:59). He stands on the primordial mound, masturbates, and creates Shu (air, male) and Tefnut (moisture, female). Then he creates the other gods and humans, molding the semen with his fingers. In another version, Atum names the parts of the body. He can also be assimilated with Ra into Amon-Ra, but this is a later addition from Thebes.
2. **Nun—the Abyss:** Nun stands alone on a mound after the inundation recedes. Atum in this version is the son of Nun.
3. **Memphite theology or Creation "by the word":** Ptah created with the "heart and tongue." Wilson (58-60) says it was the ancient "Egyptian's closest approach to the Logos doctrine—in the beginning was the Word, and the Word was with God, and the Word was God." Ptah creates Atum. R. David in *Ancient Egypt* (1982:46) calls this an unexciting myth.
4. **Ptah :** by spitting, standing on the primeval mound. Possibly related to #3. Ptah as craftsman and creator.
5. **Cosmic egg splits open:** "Which came first the chicken or the egg?" R. David calls this "the Great Cackler," and suggests it could be an ibis or a goose (1982:49). In Tutankhamon's tomb is a chipped alabaster egg and chick. Was it a ritual item and not a child's toy as usually described?
6. **Scarab:** This dung beetle is the first to come into being by "spontaneous generation" after the inundation receded. The dung beetle came out of the mud and pushed the sun across the sky (Andrews, 1994:50-53).
7. **Ennead:** It means the number 9 and is from Lower Egypt, Heliopolis.





8. **Ogdoad:** It means the number 8 and is from Upper Egypt, Hermopolis. Creation is from a lotus flower.

Nun and Naunet (watery abyss)
↓
Amun and Amaunet (hiddenness)
↓
Huh and Hauhet (formlessness)
↓
Kuk and Kauket (darkness)

Bibliography:

C. Andrews, *Amulets of Ancient Egypt*, 1994.

R. David, *Ancient Egypt*, 1982.

J. Wilson, *The Culture of Ancient Egypt*, 1968.

AMULETS

Amulets are good luck charms to magically protect you. The shape, material, color or placement all combine to give you powers forever based on the gods, prayers and incantations. In hieroglyphs, all the words for amulets are mainly from the root words for "to guard" or "to protect"—"meket," "nehet" or "sa."

Amulets were found as early as the predynastic Badarian period in the pit graves. They probably had been worn in life and then placed into the grave. It was during the First Intermediate period that amulets increased in number and shapes. This period is generally agreed to be a time of turmoil and disorder, so the need was there.

Usually amulets are incorporated into jewelry, but many were wrapped into mummies. Often amuletic charms are included in writings on papyrus or painted on wooden or papier maché coffins. They can also be carved into a stone sarcophagus. Amulets can be made of gold, silver, lapis lazuli, turquoise, carnelian, stone, wood, bone, ivory, clay, faience or organic materials. They could be in the form of gods, goddesses, sacred animals, parts of the body or symbols.

Some amulets were found mainly among the living, and others were primarily with the dead. The *Book of the Dead* included chapters on the purposes of amulets to get you into the next world, the spells to say over them to give them power, and what materials were preferred. Therefore, we have written verification of the actual amulets we find in sites.

Magical medical texts in the New Kingdom recommended that an amulet be drawn directly on the skin of the sick person's hand and then licked off so that the magic could spread throughout the body. I wonder if the paint 'tasted like medicine" or if it was sweetened?

In the New Kingdom, amulets of the gods and goddesses became more popular, especially Tuart, the female hippopotamus, who was the protectress of pregnancy. Bes was worn by women and children since Bes protected children and birth. Only in the later dynasties were Horus, Isis, Sekhmet and Bast popular.

Sir Flinders Petrie's *Amulets* (1914) classified amulets into 275 classes, but the book was written prior to the discovery of King Tutankhamon's tomb (1922) and, therefore, is incomplete, especially concerning the placement of the amulets. Tutankhamon's mummy contained about 142 amulets.

The following are a few examples of the most popular or important amulets then or now:

Scarab, KPHR, Dung Beetle or *Scarabaeus sacer,* it means "to come into being." They believed that the beetles were "spontaneously generated," and the rolling of the ball of dung was equated with the pushing of the sun across the sky. It is the most popular and numerous amulet known. It was worn to assure resurrection after death, and then it was taken to the tomb. They were used as seals with the person's name, cartouche or a spell on the reverse. They were worn on a cord or set into a ring. Many, made for the Greeks and Romans, were "fakes." Still popular with modern tourists, they are usually made of faience looking like stone.

Wedjet, Udjat, Eye of Horus or protection against the evil eye. Extremely well known and very numerous, they were mainly worn by the living apotropaically. The eye of Horus was lost during his struggle with Seth and healed by Thoth. Often made of blue faience or gold, the right eye is the sun and the left eye is the moon.

Ankh or life. Although very popular today, and often called the Coptic cross, there were very few of these (comparatively) in ancient times.

Djed, Backbone of Osiris, stability or a tree trunk without branches. The first one known was found in the Heb Sed court of the Step Pyramid (3rd dynasty). Usually found on the mummy, it should be made of gold but often is made of faience.

Thet, Tit or girdle of Isis. It is usually made of red stone, jasper or red faience, and it resembled the blood of the goddess. Many believe it is the menstrual cloth or the female genitalia.

Bibliography:
Carol Andrews, *Amulets of Ancient Egypt,* 1994.

SOME ASPECTS OF EGYPTIAN RELIGION

Our knowledge today about ancient Egyptian religion, ritual, rites and beliefs is limited by many factors. We have more information from the southern part of Egypt rather than the north, and more about the upper classes than commoners. There is difficulty in understanding ritual practices since much mixing occurred during the Ptolemaic period, and many of the surviving temples were refurbished, reconstructed or replaced during the nearly 300 years of Greek rule (332-30 B.C.E.). Graves from the pharaonic age are our best preserved evidence, but obviously present an unusual aspect of religion. Also many changes occurred over 3000 years.

The interior of the great temples was only for the priests and their assistants. The general population had small local shrines and could view the image of the god when it was carried in processions outside the temple confines, but they did not worship inside the temples.

The pharaoh was the chief priest who was suppose to make offerings, burn incense, visit the gods, etc., but we know he delegated these rituals to others. The rulers were more interested in politics and military matters in most periods. Each temple had at least one high priest. The huge temple complex of Karnak had four with that title (sem), and they controlled the rites and rituals, the large land holdings and nearly 80,000 people who worked the land. Priests often served as judges and sometimes simultaneously held another office, such as mayor of Thebes. The high priests were officially appointed by the pharaoh, but certain families, in reality, inherited titles. Often the priest of Ptah in Memphis was a power base for a son of a pharaoh. Memphis was an early capital.

Most men served about three months of each year as an assistant priest (web) in the temples. During this period, they were required to shave all their body hair daily, bathe in the sacred lake and be "pure." They polished, cleaned, painted and helped move ritual items. They received part of the offerings made daily to the temple, such as the unconsumed food offered to the statue of the god. Gifts of value were also shared by these priests in exchange for their services.

The woman is holding a sistrum and lotus.

In all periods, women served in the temples, particularly of Hathor, Neith, Nut, Bast and Isis. We recognize them in art because they carry a sistrum and wear a menit-necklace. They provided music, dance and mourners for funerals.

In the New Kingdom priestesses were called "god's wife of Amon," and Nefertiti and Hatshepsut (18th dynasty) made offerings directly to the god.

Ancient Egyptians seem to have been very religious and believed in an afterlife, preparing optimistically for it both physically and spiritually. They wanted to continue this life into death as evidenced by tombs and written sources. Although they believed in fate, it could be changed through magic, luck or the gods.

The next life was a goal, and the body was preserved so it could live again. Therefore, there are statues used as replicas of your body (ka), in case the mummy did not survive. After death, your ba (soul or spirit) could leave the body. The ba is usually shown in the form of a bird with a human face. Sometimes it is considered your conscience since we have an account of a man's argument over suicide with his ba. Your ba had to recognize your ka, thus a death mask, in order to return to it. This is one reason the various temple priests would wear a mask to resemble the god, that is, to attract the spirit of the god into the mask to transform the priest from an ordinary human into a representative of the god.

The akh was a spirit not limited by the body and it could return, for example, to advise priests to repair the tomb.

Obviously not all Egyptians were believers. Kings were challenged for the throne or assassinated, and royal tombs were robbed.

As part of their belief, the Egyptians stocked their tombs with goods for the afterlife, and had small statues of servants put into the tomb to perform jobs such as baking, brewing or candy making all through eternity. Small worker statues called ushabti were put into the tomb to respond whenever you were asked to work. The desired number was 365—one for each day of the year, so you would never need to work again, nor would you overwork your servants! Quite considerate.

The Isis-Osiris myth was powerful in most periods, but we have the story in fragments, so there are several versions. My preferred version briefly: Isis and Osiris, who were brother and sister, are married. Osiris is admired because he invented all the things that made Egypt a civilization—hieroglyphs, pens, ink, papyrus, irrigation, settled agriculture, unification—and became the first king. His brother Seth, married to his sister Nepthys, became jealous (Cain and Abel?), forms a conspiracy to kill Osiris and does. Seth tricks Osiris into getting into a coffin which floats down the Nile and into the Mediterranean, arriving in Byblos (modern Lebanon) where a tree grows around it. Isis tracks her husband's cries, travels to Byblos, and, after a complicated series of events, cuts down the tree, now a pillar in a palace, and revives her husband through sexual intercourse. They return to Egypt, but Seth has taken the throne, and this time, taking no chances, cuts Osiris into 14 pieces and scatters them into the Nile. Isis with the help of Nepthys and the canid, Anubis, who is the son of Nepthys and Osiris (aha! a love triangle, too), helped to search out the parts. According to differing versions (as usual), she either buried the parts or wrapped them, thus mummification. I prefer the latter, although I'm sure it's a later justification for mummification. In other words, she re-membered him. Only 13 parts are found (bad luck number?) and the one part needed to revive Osiris is missing, namely, his genitals. So he is wrapped and becomes the god of the next world (or netherworld which is usually in the sky, but dark). Meanwhile, Isis gives birth to Horus and hides him in the marshes (Moses!), whispering the word "revenge" into his ear until he is old enough to challenge Seth. They struggle, and Seth pokes out the eye of Horus while Horus castrates Seth. A standoff. Isis calls a court of the gods to select the next pharaoh. Is this a political commentary about inheritance rights? Since Horus was born after the death of his father can he inherit the throne? Or should Seth, Osiris' brother?

Since this is early in the dynastic period, perhaps the problem had never arisen or been decided. This looks suspiciously like a political myth. The decision is made in Horus' favor, and he becomes the next pharaoh. Seth is not killed since he personifies chaos, revolution and upheaval which must be accounted for in this world. He is given the desert as his

kingdom. Thus, the division of the Red Land (desert) and Black Land (fertile valley) was ruled by the two relatives of Osiris. From the earliest dynasties the king is called "The Horus," and the dead pharaoh is called "The Osiris." Seth is impotent, castrated and, in practical terms, deserved the desert as his realm.

Perhaps this story is too neat. The version we have comes from Plutarch, a second century Greek priest of Apollo. There are, however, fragmentary parts from earlier periods which could justify this final story. Perhaps they knew it so well that it did not need to be completely written down.

In predynastic times Hathor's symbol was a wooden post topped by the skull of a cow (Watterson, 1984:126). In the 18th dynasty temple of Hatshepsut at Deir el Bahri some columns are topped with the head of a woman with cow's ears and on a staff.

Egyptian religion was polytheistic with a belief in many gods, but it was also henotheistic, meaning that, at any one time, one god was superior to the others. We know that the pharaoh's name reflected which god he thought most powerful. Thus *Amen*hotep changes his god and name to Akhen*aten*. The family of Ramses recognized Ra more than others. Ancient Egyptian religion was rarely exclusive except in a very brief, less than 20-year period, during the reign of Akhenaton when he actually erased the names of other gods and disbanded their priests. Some suggest that this was to break the authority of the priests of Amon, and this theory is argued endlessly. I doubt that Akhenaten was a monotheist.

The name of the goddess Isis has become the acronym ISIS for Integrated Student Information System. The name of the pharaoh Seti in the 19th dynasty was based on the name of the god Seth, and it has become the title of an organization's goal: Search for Extraterrestrial Intelligence, SETI.

On the back of the dollar bill is the all-seeing eye of Horus atop the truncated pyramid.

Egyptian religion is a rich field with an enormous bibliography.

Bibliography:

J. Griffiths, *Plutarch De Iside et Osiride*, 1970.

E. Hornung, *Conceptions of God in Ancient Egypt*, 1971.

L. Lesko, "Egyptian Religion" in *Religions of Antiquity*, ed. R. Seltzer, 1987, 1989.

S. Quirke, *Ancient Egyptian Religion*, 1991.

S. Sauneron, *The Priests of Ancient Egypt*, 1960.

B. Watterson, *The Gods of Ancient Egypt*, 1984.

PRECINCTS OF ETERNITY

Jean-Claude Golvin

Jean-Claude Golvin is the research director of the French National Center for Scientific Research and director of the French-Egyptian Center at Karnak.

The sites of Pharaonic temples were chosen in accordance with a tradition whose origins are sometimes lost in the mists of time. The great temple of Amon-Re at Karnak, for instance, marked the spot where the first mound emerged from the waters of noun (the primordial ocean), a pointed knoll which the god Amon caused to rise at the beginning of the world and around which he continued to shape his creation. The very name of the god (Imm, Amon) means "the hidden one," in other words, he who might assume any shape or size and who was present in the inmost depths of all creatures and all the material world.

The Egyptians thought, however, that the forces of evil, over which the god alone could triumph, could not be defeated once and for all. It was therefore vital to encourage Amon to fight them constantly and regularly to perform anew his act of creation. Such was the underlying significance of the devotions offered to him in all the temples. Through suitable offerings, made at the proper times and under ritual conditions laid down in detail, an attempt was made to keep the god in the frame of mind needed to ensure that the universe remained in a state of balance.

A tiny part of the divine substance was concentrated in a small gold statuette barely more than a cubit high (52 cm), placed in a kind of monolithic granite shrine (the naos) capped by a pyramidal form and provided with wooden shutters which could be opened. The Egyptian temple was not a place of worship where large numbers of the faithful could gather, but god's home on Earth, a dark and mysterious dwelling accessible only to officiating priests and to the first among them, the Pharaoh, who enjoyed the rare privilege of being able to gaze upon the god's face.

The most important part of the temple, where the tremendous energy needed to uphold creation (the divine statuette) was stored, was also, paradoxically, the smallest part. The successive monumental encasements in which it was set were intended to protect it from any aggression or harmful influence. The statuette and the naos, which served as the first encasement, were located in a small dark chamber, the sanctuary. They were flanked by the private apartments of the god which possessed all the attributes of a sumptuous palace and where he lived and reigned like an earthly king. The only function of the priests was to be his faithful servants.

The god was worshipped daily just as though he were a person of flesh and blood. Ritual acts, chants and prayers accompanied the various parts of this recurring ceremonial. In the morning the officiating priest broke the clay seal affixed at the end of the previous day. He thus released the cord that held the wooden shutters closed, affording access to the divine statue. He then proceeded to wash and dress the god and to ensure throughout the day that the necessary offerings of food were made to him. The god was believed to feast on the essence of these provisions which were subsequently sent to the royal altars and then to the priests, for whom more material forms of satisfaction were appropriate.

Many other temples in Egypt, including the famous temple at Luxor, were dedicated to Amon. How could the same god, who was proclaimed to be unique in hymns and prayers, be in several different places at the same instant? To the Egyptians there was no contradiction here. In reality, the statues of Amon placed in the heart of the sanctuaries served simply

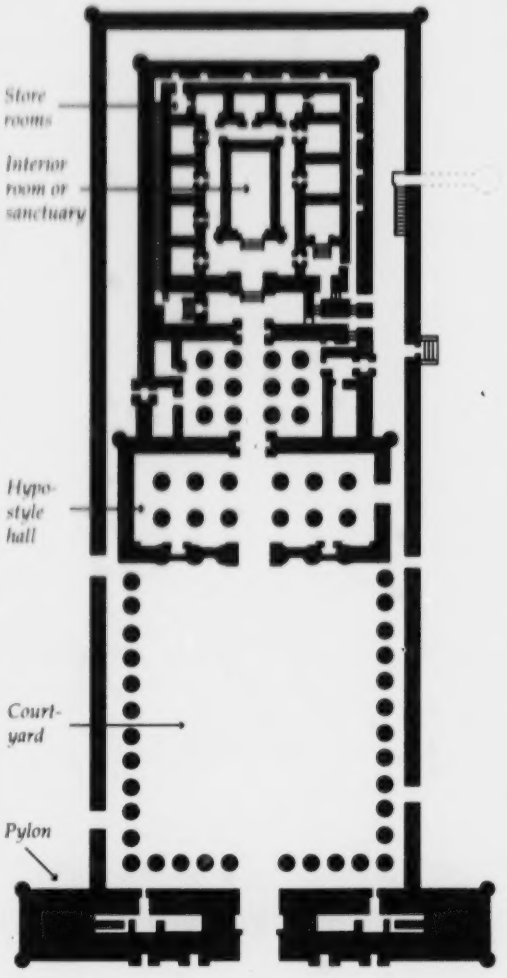
as points of "concentration" and "emergence" for this omnipresent god.

Some cities also honoured other gods, but their temples have not been so well preserved. The great sanctuary of Heliopolis, dedicated to Re, has been almost entirely destroyed, while those of Ptah at Memphis or Thoth at Hermopolis, which have greatly suffered from erosion, cannot compete with the impressive ruins at Karnak.

KARNAK, A DYNASTIC TEMPLE

The temple of Amon-Re at Karnak was probably founded in the 20th century BC, during the reign of Sesostris I (1971-1929 BC). It steadily grew in size, ending up as a colossal complex of buildings forming a four-sided figure measuring 600 metres from corner to corner. It assumed such proportions and underwent so many metamorphoses because it became the great dynastic temple of Egypt to which each Pharaoh came to find the source of his legitimacy. Hardly had he assumed office than the new sovereign had a building put up for his divine father, Amon, in order to secure further benefits from him. A system of give-and-take was thus established between the god and the king, which underpinned the country's stability. Each monument, which was first and foremost an offering, might very well be destroyed in the next reign by a king who wished in his turn to perform a notable act. The dismantled stones were used again in new monuments.

Typical floor plan for a temple



Karnak is thus the product of a long history of destructions, additions and alterations, and its foundations and thick walls are consequently made up of thousands of stone blocks, scattered around and jumbled together. These are patiently being restored to their former positions and studied by archaeologists seeking to reconstitute the original form of the vanished monuments.

A form which, in itself, has nothing special about it: all the temples of ancient Egypt resembled one another. In front of the sanctuary were rooms paved with huge flagstones. At the entrance to the hypostyle (pillared) halls set along the main axis of the temple there were great stone doors framed by two massive towers symbolizing the two mountains at the confines of the land of Egypt: the Arabian chain in the east and the Libyan chain in the west. The doors and towers together formed a structure known as a pylon which marked the boundaries of a sacred place. Before the doorways huge wooden poles were adorned with banners that waved in the wind, revealing the movements of the "divine breath" through the world.

The general orientation of the temples was also a matter of deliberate choice. The main axis of the temple of Amon-Re followed the east-west course of the sun. It was intersected

by a second perpendicular axis, running from south to north like the Nile. This royal axis, followed only by solemn processions, consisted of a series of courtyards and pylons preceded by colossal statues of the royal dynasty, which expressed in material form the eternal presence of the sovereign in the temple.

The way in which scenes were set out on the walls was patterned on the world in which the Egyptians lived. The bottom was bordered by geographical sequences in which the Nile gods alternated with the goddesses of the countryside and figures symbolizing the different administrative districts of the country, known as nomes. The ceiling was decorated with motifs inspired by astral themes: stars, constellations, zodiacs or representations of the sun's celestial course within the body of the goddess of the sky, Nut.

A PRECISE SYSTEM OF SYMBOLS

The bas-reliefs on the walls indicated the function of each room. Divinities and plants that were emblematic of the north (the Nile delta, Lower Egypt) were placed on the northern side and those relating to the south (the Nile valley or Upper Egypt) on the southern side. Along the axis of the high cornices projecting out from over the doors the disk of the sun could be seen, protected by two upright cobras facing in opposite directions. The sun's celestial course was portrayed by the unfolding of two large wings. Inside the rooms were religious scenes depicting the essential ritual acts that were accomplished with the participation of divinities, the king and priests—offerings, processions, acts of consecration, acts performed on the occasion of coronations or jubilees. On the outside, scenes were portrayed that showed the exploits achieved during the reign: the slaughtering of enemies, conquests and battles.

The founding of a temple was marked by ceremonies in which the succession of building operations was accompanied by symbolic acts. Many scenes depict the king marking out the layout of the temple with string, scooping out the first furrow with a hoe, purifying the foundations with natron, laying the cornerstones with the help of a lever and finally presenting the dwelling to his master, Amon-Re.

The temple was thus ushered into existence like a living being. In one corner or the temple a "foundation deposit" was buried. This was a collection of objects comprising scale models of tools, representations of offerings (glazed earthenware lettuces, ox legs and heads and sacrificed geese) and briquettes marked with the name of the king who had founded the temple. These deposits are a boon to archaeologists as they serve as the equivalent of birth certificates, enabling them to assign a date to the building of a temple.

Other temples formed part of a complex designed to ensure the dead Pharaoh's survival in the hereafter. Human beings were considered by the ancient Egyptians to have several components: the body, which was the material covering of the human spirit (which was mummified in an attempt to preserve it), but also the Ba (the soul), the Akh (the immortal principle), the shadow and the Ka (the life-force). The Ka of the king was the very embodiment of his royal rank, of the indestructible, cosmic part of his being, and after his death joined up with that of his divine ancestors.

The pyramid was associated with the royal tomb, both in its form, which was a symbolic reminder of the original mound and hence of the birth of the world, and through its alignment with the four cardinal points with, inside or outside as the case may be, its flights of steps. It thereby enabled the king to ascend to heaven, or in other words to eternity Continually reborn like the morning star which rises every day in the east, he was then assured of living for "millions of years."

Reprinted with permission from *The Unesco Courier*, November 1990, pages 15-17.

ANCIENT EGYPTIAN CEREMONIAL MASKS

An often overlooked aspect of ancient Egyptian religious practices is that the priests and priestesses wore masks during ceremonies. This is especially important to remember when viewing the priests and priestesses involved in the rituals related to the many animal cults.

What are usually called the "animal-headed gods" of ancient Egypt are actually the priests performing the rituals wearing animal masks. This deceptively simple statement dramatically changes the ways we look at Egyptian art and our understanding of their religious beliefs.

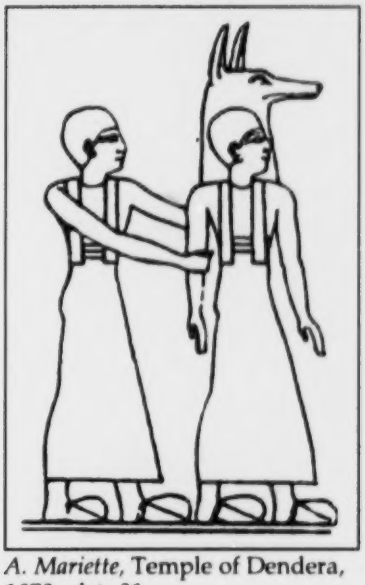
With the current interest in the masks of Native Americans, Indonesia and Africa, this important ancient link should not be so ignored. It should rather surprise us if the ancient Egyptians did not wear masks during religious ceremonies as they still do in Africa.

Many famous Egyptologists have remarked on this subject and have generally been overlooked. Ancient authors have also made references to the Egyptian masked priests. Tomb wall paintings and temple reliefs depict such scenes with masked priests, and there are actual masks in museum collections.

My evidence has been assembled from archaeological materials, ancient writers, modern anthropological reports, religious studies of the phenomenon of masking, interviews with people who still wear masks for ceremonial purposes and critically analyzing the artistic records on Egyptian temples and in tombs.

In the spring of 1985 I went to the Roemer-Pelizaeus Museum in Hildesheim, Germany. With the aid of the enthusiastic curator Dr. Schmitz, I tried on a full-sized terra cotta Anubis mask that I had seen in the museum catalogue (Kayser, 1966, Plate #74).

The mask fit easily over my head, and balanced well on my shoulders with the weight of the terra cotta distributing itself across my shoulders and back. Padded clothing would have better cradled the mask. The top of the inside of the mask was slightly curved, and so cradled my head which helped hold it in place. The projecting snout of the jackal balanced against the top of my forehead. The eye holes for the mask were in the long neck area, and not where the actual jackal's eyes on the mask would be expected. I could see out although my peripheral vision was limited. The eye holes were in the correct place for a person wearing the mask.



A. Mariette, Temple of Dendera, *1873, plate 31*

There were air vents near the ears of the mask and in the nostrils. The mask was about one foot higher than your head, and it would have made the priest wearing the mask more visible to the crowds watching a procession. It also elevated him from the surrounding priests.

The use and position of this mask is further corroborated by a carving from the Temple of Dendera. The Anubis mask was carved behind the man's head. The drawing can be found in Mariette's *Denderah IV*, 1873, plate 31, which was printed in reverse because of the lithographic process. Sacred processions were often depicted on the walls of Egyptian temples, but this carving provides us with the artistic evidence to validate the idea that the priests were masked for rituals and ceremonies.

Paintings from the tomb of Horemhab. The hair or wig of Isis falls only over the shoulder closest to the viewer, but over both shoulders when an animal helmet mask is worn by a man.

Compare the wall painting of the masked priest (above right) with the wooden jackal mask (right). It has holes around the edge to hold the stitched, possibly padded, material. The lower jaw moves. Notice the eye holes. Louvre, Paris.

Clay was chosen because it symbolized the yearly resurrection of the new life giving Nile mud from the inundation. The priests of Anubis appropriately wore a mask of Nile clay to represent their function of eternal life through mummification. Hildesheim, Germany

Another excellent example is the wooden decorated face mask of Anubis from the Louvre. There are eye holes where the eyes should be, an articulated jaw so that the lower portion can be controlled by a string, and holes around the edges where a padded linen head covering could be attached. The wall painting of Anubis from the tomb of Horemhab completes the picture. A stitched, probably quilted linen head covering clearly suggests that the material is caught up in the holes of the jackal face mask.

Look at the tomb wall paintings and temple reliefs of the 18th, 19th and 20th dynasties in particular. An artist's convention is very obvious once you accept the idea of ceremonial animal masks instead of thinking that the gods were "half-human, half-animal."

When an animal mask is shown on a man's body, then the lappets of the mask hang down over both shoulders. Usually when a person has a long headdress, crown, hair or scarf overlap, it is only over the shoulder closest to the viewer and not over the far shoulder. This, until now, unnoticed artistic convention is evident when there are combinations of human and animal masked figures together in the same scene.

Gold weights appear to be affixed to the ends of the two front lappets and the back edge of the stitched helmet masks seen on wall paintings. If the mask was terra cotta, the mask would rest on the curve of the shoulders, and the edge could be concealed with garlands, necklaces or a gathered priestly garment. On statues, the raised edges of the helmet masks are obvious, and it is rare for the animal "head" to fuse smoothly onto the male body without the raised lappets.

Women's bodies with the animal masks are shown differently than men's with animal masks. A woman's body with an animal face mask, such as Bast, did not have the two lappets because they could wear face masks which could be tied behind the head under their hair or a wig. Looking closely at the wall paintings or carvings, you can often see the curve of the mask ridge under the chin. Since male priests shaved their hair off completely (Sauneron, 1960:37), a mask worn only over the face would have looked too awkward tied behind the bald head, and it would have slipped around. The helmet mask is an obvious solution for men. Women rarely are shown wearing a helmet mask. Women, more often, wear head decorations such as the horns of a cow, the cow's ears of Hathor, or the feather of Maat almost like a hat.

Since masks can be made out of practically anything, I wonder how many museum basements have masks that have collapsed. If made of reeds, are they mistaken for unstable baskets? Were small Horus hawk faces originally fitted into padded Horus hoods which were made of linen and have since disintegrated? Since there are still religious groups around the world where animal masks are worn, ethnographic comparisons can be made.

Perhaps the reason we have so few masks in excavations is that only the high priest was masked in a permanent material such as the terra cotta mask from Hildesheim, and the next level of priests wore a wooden mask, and lower web priests wore linen. Or the mask could have been passed on from one generation to the next as Claas Bleeker says that the Heb Sed robe was for more than 15 centuries (Bleeker, 1967:107). Is this the reason why most masks are identified as being from excavations of the later periods?

Cult images were brought out of the temples for the people to see during the festivals, and the "images" acted as oracles answering the questions that were asked (Hornung, 1982:135). Priests wearing such "images" or masks could have performed this function easily. During the reign of Ramses III, for example, there were 162 days of festivals in the year and 35 days of festivals at Dendera in honor of Hathor (Bleeker, 1967:32).

The idea of animal masks also fits the Egyptian religious beliefs. Erik Hornung says that "... individual animals are not the god, but the god may take up his abode in them." (Hornung, 1982:137). If this is the case, then the animal mask worn by a priest during a ritual could attract the god to enter into the mask. This is currently believed by the Hopi and groups in Indonesia and Africa.

A mask is also convenient during the coronation of a pharaoh. Who was to perform the ceremony if the pharaoh was a god? An ordinary priest? A masked priest could conceal his identity and act as a representative of the gods while wearing the hawk mask of Horus. The mask concealed a lower status while retaining the fiction of the gods performing the ceremony. They could remain anonymous.

Temple of Dendera doorway with Anubis mask carved behind the man's head. Shown facing in the correct direction.

Anonymity would have been important to the priests of Anubis since they worked with the dead. Usually such people do not want to be directly identified. When we look at tomb wall paintings of the funerary rites, we see that the male figures with the animal masks, Anubis, are in motion. Working. Often nearby is the image of the god Anubis reclining. The priests of Anubis might also want to cover their noses from the foul odors of the dead bodies brought to them for embalming, and from the dust of the natron used during the process.

Ancient literary sources contain references to the Egyptian Anubis masks, although from a later period. Both Juvenal and Cyprian refer to the masked priests in a derisive manner (Witt, 1971:199-200).

Since I had such success with the "hands-on" (heads-on?) experiment in Hildesheim, I decided to return to the Dendera Temple to check out the carved mask priest from Mariette. Was it still there? I was leading students on a study tour and asked them to help. The first to find it was the hawk-eyed Tomi Hawkins (yes!). But going in the "wrong" direction. The lithographic process of 1873 reversed the drawings. Now the priests were coming *out* of the storage rooms on the temple's roof where the famous Zodiac ceiling room is located. The priests are in a line in their full regalia, carrying standards and walking towards the stairs to go *down* into the temple. I know of no book that shows the correct *direction* of the line of priests, or of the *location* of the three priests *separated* from the rest of the line. Two priests are properly directing the Anubis masked priest, and are carved *inside* of the *doorpost*. Since Anubis guarded the gate to the next world, and the symbolism of a doorway is extremely powerful in mythology, folklore, ritual and architecture, this location is very significant.

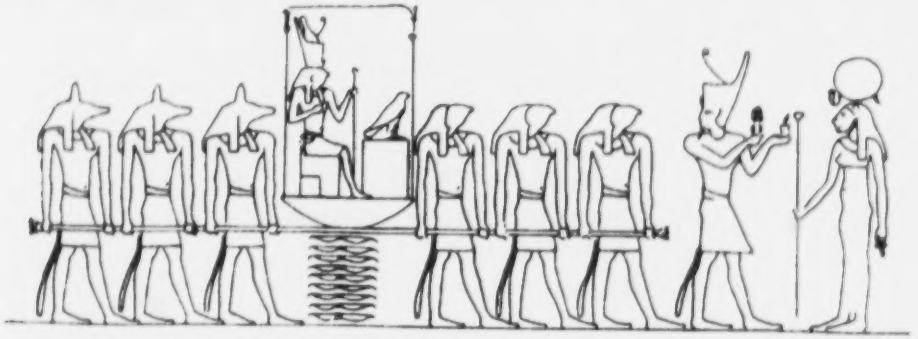
For practical purposes, doorways are obviously places of transition. The association of the masked priest of Anubis with the most important transition, that of death, is doubly powerful in a doorway. In folklore and mythology doorways hold secrets, and they are usually sanctified. Victor Turner's *The Ritual Process* discussed the "rites of passage," saying that in many cultures masks are used for such transitions as birth, marriage, initiations, and death since they are liminal states. He referred to people going through such changes as "liminal personae" (1969:94-95). He translated "limen" from the Latin as meaning "threshold." But he did not define the word "personae" whose first meaning in Latin was "mask," and not "person" as popularly translated. This masked priest is truly a "liminal persona." The location has been, surprisingly, unnoticed.

I photographed and investigated the nearby staircase, and found that the steps (risers) are extremely shallow, about four inches high. They are almost a ramp, and, therefore, a top-heavy masked priest could easily glide down into the temple.

The sources for studying and researching these masks have been isolated by language barriers, traditional categorization of fields, disciplines and chronology. Masks for priests have often been mentioned by Egyptologists as an aside, but rarely has anyone made all of the archaeological, anthropological, artistic, hieroglyphic, literary and ritual connections.

New documents and artifacts are not always the only method of finding new interpretations, but rediscovering information already available, yet not assimilated, can be just as important in revising our past beliefs.

Bibliography:
Bleeker, Claas, *Egyptian Festivals: Enactments of Religious Renewal*, Leiden: Brill, 1967.
Bonnet, Hans, *Reallexikon der Aegyptischen Religious Geschichte*. Berlin, "Die Maske," 1952.
Desroches-Noblecourt, C., *Tutankhamen*, 1963.
Hornung, Erik, *Conceptions of God in Ancient Egypt*, 1982.
Lexikon der Aegyptologie. Wiesbaden, "Die Maske," pages 1196-1199, 1980.
Mariette, Auguste, *Denderah IV*. Plate 31, Paris, 1883.
Maspero, Gaston, *Journal des Savants*, July, Paris. Book review of *Deir el Bahri*, pages 401-414, 1899.
Murray, Margaret, *Melanges Maspero*, "Ritual Masking," pages 251-255, 1934.
Sauneron, Serge, *The Priests of Ancient Egypt*, 1980.
Schäfer, Heinrich, *Principles of Egyptian Art*, "Isolated Objects," page 122, Oxford, 1984.
Turner, Victor, *The Ritual Process*, 1969.
Witt, R.E., *Isis in the Greco-Roman World*, plate 46, 1974.
Wolinski, Arelene, "Egyptian Masks: The Priest and His Role," *Archaeology*, January 1987.



"The train of priests, led by the pharaoh ...." is part of the caption from *Cleopatra's Egypt* (Brooklyn Museum, 1988, p. 37). Notice the Horus falcon masks and Anubis jackal masks on the priests. Drawing based on Chassinat, 1960, *Le Temple d' Edfou*.

MUSINGS ON THE WORD MASK

It is difficult to get agreement for the word mask in Egyptian hieroglyphs. Since they had masks, there should be a word for them.

Surprisingly, the English word mask does not derive from a Latin or Greek root as would be expected, but arrived in Medieval Latin from the Arabic word *maskhara* or *mskr* as a root since the vowels are not shown in a way similar to hieroglyphs. This Arabic word contributed the Spanish *mascara*, the French *masque*, the Italian *maschera*, the German *die Maske*, the English word, and to many other languages.

Since Spanish, French, Italian, German and English are Indo-European languages, and the words are extremely close, one would expect a common Latin or Greek root, but that is not the case. The ancient Latin word for mask is *persona*, and the ancient Greek word is *prosopon*. Neither of these could have been the source of our word mask.

In ancient Latin, the first definition given in the *Oxford Latin Dictionary* is *not* a "person," as you might expect, but a mask with the additional comment that it was used by an actor in a play. If an English speaker was asked what *dramatis personae* meant, most would answer "the people in the play" or perhaps "the persons in the drama." Since our restaging of ancient plays rarely has the actors wearing masks, we no longer make the connections that an ancient Roman would have.

When the *Arabic Dictionary* (The Wehr-Cowan) is consulted, then there is a great clarification. The meanings of "mskr" (1976:908) are: 1. to transform, convert, distort, spoil; 2. metamorphosis, conversion, falsification; 3. to transform into an animal, monster or freak; 4. a buffoon, harlequin, clown, mock, deride, laugh.

The above includes most of the times when peoples around the world mask: from fun to ritual. These definitions directly relate to the work I have been doing on the use of animal masks by the priests of the various animal cults in ancient Egypt.

So using the all too obvious Arabic root of *msk* I looked into the readily available Faulkner's *Concise Dictionary of Middle Egyptian*, and to my surprise found *msk* with two meanings which the determinative caused to differ: first, "leather," and second, "skin." Pun intended (1962:118). There are many examples of masks made from leather. Africa would provide the closest examples.

Since I believe the word mask could replace image in some translations, the *Oxford Latin Dictionary* (1983) was consulted for the meaning of the word image which, in Latin, is *imago*. It meant the masks worn by actors in the funeral processions for important men in Rome. The *Oxford Classical Dictionary* (1968) offered the additional information that the masks were made of plaster or colored wax. During the first through fourth centuries C.E., wooden panels were painted with wax and in Egypt used as mummy masks. They are called "encaustic" panels. Aha, another connection!

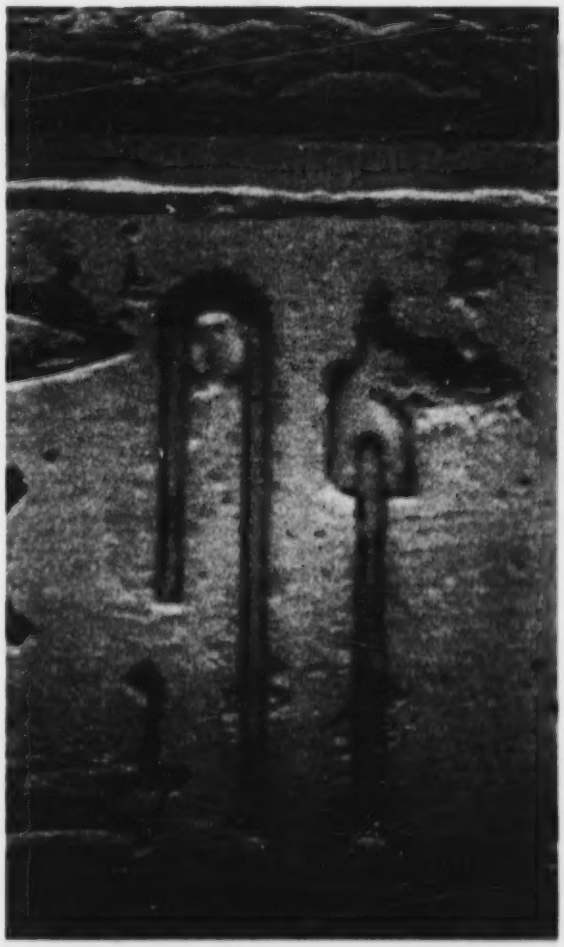
Since my *Oxford Latin Dictionary* was open, I decided to look for any word in Latin starting with "masc ..." What word did I find? It is so obvious: *masculinus*. The *imago* worn in Roman funeral processions were for men. In most places in the world masking is a male preserve, because masks usually symbolize power. Is it a coincidence that in Africa today very few societies permit women to wear a mask for ritual purposes?

How did the word come into Arabic? From Egyptian? As I have pursued this word, I have become more impressed with the thread that weaves us to the ancient world through the Arab world and entwines us together.

EGYPT IS OF AFRICA

Not only is Egypt on the continent of Africa, but in one important aspect, that of masking, ancient Egypt shares a significant link with modern Africa. What were called the "half-animal, half-human" gods of ancient Egypt are actually the priests of the various animal cults wearing masks while performing the necessary rituals and ceremonies (Wolinski, 1986:47; 1987:22). The reasons for wearing a mask in both ancient Egypt and modern Africa are basically the same: to transform the wearer and to symbolize or confer power.

The best known mask from ancient Egypt is King Tutankhamon's gold mummy mask. Incised on the back of the mask in hieroglyphs is Spell 531 from the *Coffin Texts:* "May this (the mask) make him (the deceased) a spirit." The purpose of the mask was to transform. When the ba and ka or the mobile spirits returned to the tomb, then they could identify the body beneath the wrapped mummy (Andrews, 1984:27). Similarly, when a priest of Anubis wore the jackal mask, he could attract the spirit of the god into the mask which would empower or transform the priest into the god. Current African beliefs about the purpose of the mask include such phrases as: the mask "embodies a spirit," is "imbued with the spirit," or it is "truly possessed by spirits" (Cole, 1985:19-20). In modern Africa the masked dancer does not represent the god, but is entered by the god (Cole, 1985:20).



The head (mask) on the staff is the word "usr" meaning "power."

Also today in Africa, a mask is a power object (Cole, 1985:26), and it acquires more power by being carried out into a crowd or into the sun on a staff (McNaughton, 1979:41). "Most African sculptures are functional in the sense that they are worn as masks or held as staffs" (Vogel, 1981:7). Several examples from ancient Egypt reflect this use of the mask on a staff to mean power. Most important is the hieroglyphic word for power, "usr," which is pictured as the head (mask) of Anubis on a staff. Another name for Ramses II is User-Maat-Ra. The power symbol, held by the goddess Maat, is best seen carved deeply into his temple walls.

Jill Kamil wrote about the need for the "images" (read: "masks") in the temple of Dendera to be taken out into the sunlight on the roof and exposed to the rising sun in order

to be empowered since the "images" kept in the dark lost their strength (1983:163).

On the large gilded wood shrine of Tutankhamon are two women (priestesses?) with their arms upraised, facing a mask on a staff (Piankoff, 1977:121). What could this mean? What are they doing? Are these masks in storage?

Masking in modern Africa is "exclusively a male activity" (Cole, 1985:16). In general women are not permitted to wear masks (Cole, 1985:15), but they can ornately decorate their faces (Adams, 1993). In ancient Egypt women usually wore their identifying emblem, such as the ears and horns of Hathor or the scorpion of Selket, on their heads like hats. Bast wore only a cat-face mask. Only Sekhmet wore a full head mask, and there is only one example of Hathor with a full cow's head. When there is a man's body, however, then there was usually a full helmet mask.

African myths from the Dogon, Senufo, Baule, Kuba and others are puzzling because "women first had the secrets of the masks" (Cole, 1985:15). They were taken over by men, however, and women were excluded from wearing them. Cole thought this "recurrent myth seems to reflect male fears of female powers" (Cole, 1985:15). The women of ancient Egypt seem to be part of this African tradition. Some of these similarities apply worldwide, but the geographic closeness and the visual uses are more than coincidence.

Why has the African connection gone unnoticed? Partially because Egyptologists tend to be associated with studies of the ancient Near East and with Biblical studies. At the turn of the 20th century, Gaston Maspero commented on the use of animal masks. By mid-century, however, an Egyptologist said this about the gods of ancient Egypt: "Most of them were somewhat crude and reminiscent of the fetishism which still holds in its clutches a large portion of the uncivilized Negro tribes of Africa" (Steindorff and Seele, 1942:137). Several paragraphs later they were still struggling with the problem of animal "headed" gods: "These are all conceptions of the gods which at first thought appear to us not only inherently strange, but even as utterly unworthy of a cultured race" (Steindorff, 1942:137). These authors wanted to disassociate Egyptian from African religions. What an ethnocentric attitude! They wanted no traces of "primitive" religious practices lurking in "their" field of study.

Such opinions seem to have discouraged further pursuit of the African connection, but the similarities suggested here should be investigated.

Bibliography:

M. Adams, "Women's Art As Gender Strategy Among the We' of Canton Boo," *African Arts*, Vol. 26, #4, October 1993.

C. Andrews, *Egyptian Mummies*, 1984.

H. Cole, *I Am Not Myself*, 1985.

J. Kamil, *Upper Egypt*, 1983.

P. McNaughton, "Secret Sculptures of Komo," *ISHI*, #4, 1979.

A. Piankoff, *The Shrines of Tut Ankh Amon*, 1977.

G. Steindorff and K. Seele, *When Egypt Ruled the East*, 1942, 1968.

V. Turner, *Celebration*, 1982.

S. Vogel, *For Spirits and Kings*, 1981.

A. Wolinski, "Ancient Egyptian Ceremonial Masks," *Discussions in Egyptology*, Dec. 1986.

___ "Egyptian Masks: The Priest and His Role," *Archaeology*, Jan. 1987.

ART

Ancient Egyptian art is immediately recognizable and gives an appearance of changelessness. This superficial sameness is misleading because the variations are primarily in the slowly changing details. Some words describe the 3000 years of Egyptian art—simplicity, elegance of line, dignity, firmness, forcefulness and durability. What is so surprising is that our modern aesthetic sense in the west corresponds in many cases to theirs. Before we could read hieroglyphics, we appreciated their designs and colors. Most objects we admire today are usually out of context, no longer used for their original purpose and the symbolism not understood. Yet, we admire the trained artists's or craftsman's hands in things that were created so long ago.

What follows is an extremely brief survey of architecture, sculpture, wall reliefs and paintings. Many of our examples are from funerary subjects because the tombs were primarily in the desert and, therefore, survived weathering better than houses or palaces. It must be stressed that the Egyptians' interest was in immortality and not in death itself. Although their art can help us to understand what they valued through the quality of the materials, the careful craftsmanship and their willingness to bury valuable gold treasures, we have only a fraction of their production. Much has been melted down, broken apart or plundered. Incredibly, what we do have is so overwhelming in the amount and quality.

ARCHITECTURE

Pyramids are the most recognizable monuments of Egypt, but they are not the only ones which have survived until today. Also during the Old Kingdom, tombs were carved into the rock cliffs with elaborate facades near Aswan. In the 11th dynasty, Mentuhotep built a complicated monument against the rocky hills near Thebes. From a large tree-landscaped courtyard at the base of the hillside, a ramp led up three terraces to a pyramid which was built on top of the structure. The tomb, which was cut into the side of the cliff, was behind the pyramid. Next to it is the famous 18th-dynasty temple of Queen Hatshepsut called Deir el Bahri which was influenced by this earlier monument.

Other rock-cut tombs, found near Beni Hasan on the east bank of the Nile, are from the Middle Kingdom and the period of Akhenaten. This is unusual because tombs are usually on the west bank. The 18th, 19th and 20th dynasties dug their tombs in the Valley of the Kings, Valley of the Queens and Valley of Nobles on the west bank of the Nile near Thebes. Some of these tombs are cut deeper into the hillsides than earlier periods. For example, the tomb of Seti I of the 19th dynasty is more than 300 feet deep.

All of this experience with rock culminated in the temple of Ramses II of the 19th dynasty at Abu Simbel which was also carved out of the living rock with four 65-foot-tall statues of the king chiseled out of the cliff face. It was dug 154 feet into the hillside facing east so that the sun lit the statues of the king on the back wall of the temple on February 20 and October 20. This temple and the smaller temple for his wife, Nefertari, were moved to higher ground in the 1960s when the building of the Aswan Dam would have submerged them under the newly created Lake Nasser south of the first cataract.

Free-standing temples were numerous. The largest religious structure was the temple of Amon at Karnak which developed from a Middle Kingdom shrine and was constantly added to in later periods. The perimeter was nearly one mile long. An avenue lined with sphinx led to the nearby Luxor temple. Temples had tall front walls called pylons or gates which were often 60-feet tall and almost 20-feet thick. They were filled with rubble. Large

courtyards were inside the walls. In the innermost part of the temple was the sanctuary with a statue of the god and storerooms. When the Greeks ruled Egypt, they restored and reconstructed many of the temples at Edfu, Dendera and on the island of Philae south of Aswan. "Innovation in temple architecture was not only unnecessary but also undesirable," said Rosalie David (1982:129). While we can marvel at the engineering abilities of the ancient Egyptians, their temples, even in ruins, can also appeal to our aesthetic sense.

SCULPTURE

The statues of the king were shown with special conventions. He was usually shown seated with his hands on his knees or, if standing, his left foot was slightly forward. He is usually motionless, dignified, stately and in repose with a detached look on his face. Some statues show the king kneeling in order to make an offering. If a woman is included, she is often shown with her arm around him to show his importance. After the Hyksos were expelled by the 18th dynasty, the severe lines were softened, and there was an attempt made to show greater human emotions. Over time sculpture showed the changes in the religion, especially during the Amarna age of Akhenaten. Nude male statues were rare. In the Cairo Museum are a pair of 13-foot-tall statues of Akhenaten. One has a skirt, but the other is nude and without genitals. Another unusual statue of the post-Amarna age is the three-foot-tall gilded wooden striding sculpture of Tutankhamon. It was rare to show a three-dimensional sculpture of a pharaoh in motion. In all periods the monumental statues of the pharaohs and gods in the temples are impressive.

Scribes were shown cross legged or with one knee raised and bent, but other commoners and servants were carved with more flexibility in the conventions. Animals were shown realistically in nearly all periods. As a generalization, the more durable the material the more important the person. Stone, gold, bronze and wood were the most used materials that have survived. In the hands of these master sculptors the results were superb.

RAISED RELIEFS AND PAINTINGS

In some Old Kingdom tombs the stone walls were carved and the reliefs were painted. During the First Intermediate Period, paintings on plaster, carved to look like a relief, were created cheaper and faster so that more people could afford them. For faster jobs, the plaster reliefs were even omitted and the paint was applied directly to the walls. Most wall reliefs and paintings we have today are from inside tombs where they were protected from the sun and wind. Not only the techniques but the subject matter changed over the dynasties. At first the carved painted reliefs were to convey a message. Cattle were carved so that they could be counted and individual fish could be identified. Scenes of everyday life, work, rituals and games were included in order to insure the continuity of these activities into the next world. During the New Kingdom, banquets, parties and dancing girls were added, and the walls became very dramatic.

Some colors are still fresh and alive today. Minerals were powdered to mix the pigments for paints although a few were made with vegetable matter.

In the later dynasties a rigidness returned, and a nostalgia can be seen.

Bibliography:
R David, *The Ancient Egyptians*, 1982.
T.G.H. James, *Egyptian Sculpture*, 1983.
A. Mekhitarian, *Egyptian Painting*, 1978.
H. Schäfer, *Principles of Egyptian Art*, 1974.
R. Wilkinson, *Reading Egyptian Art*, 1992.

PYRAMID CHRONOLOGY

Pyramids are usually named for the nearby modern village or named by groups. Old Kingdom pyramids are concentrated near Memphis, and Middle Kingdom near Lisht. The following is a chronological list of the pyramids referred to in the text and, therefore, it is not complete. All numbers are approximate.

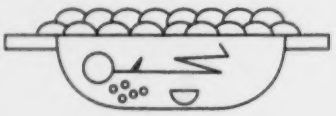
					Height		Base	
Dynasty	King	Place	Features	Angles	Original	Now	Original	Now
III	Zoser/Djoser	Saqqara	Stepped	N/A	?	204'		411'x 358'
III	Huni?	Maidum	Collapsed	54°	300'?	213'		470'
IV	Senefru	Dashur	Bent	54°27'44" 43°22'	336'?	319'		620'
IV	Senefru	Dashur	Red	43°40'	___	332'		700'
IV	Khufu/Cheops	Giza	Great	51°50'32"	481'?	450'	756'	746'
IV	Khephren/Khefre	Giza	Casing at top	52°20'	471'?	448'	707'	691'
IV	Menkaure/Mycerinus	Giza	Third of Giza	51°20'25"	218'?	203'		355'
V	Unas/Wenis	Saqqara	Pyramid Texts	Rubble	___	rubble		
VI	Teti	Saqqara	____	53°7'48"	?	160'	rubble	rubble
VI	Pepy II	Saqqara	Texts	53°7'48"	?	160'	rubble	rubble
XII	Sesostris/Senusret III?	Dashur	Black, Brick	57°15'50"	215'?	90'		344'
XII	Amenemhat III	Hawara	Brick, near labyrinth	48°45'	?	191'		350'

The step pyramid of Zoser in the third dynasty is at Saqqara and was surrounded by a wall.

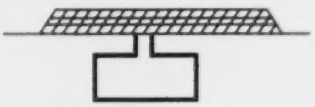
PYRAMIDS AT A GLANCE

The evolutionary character of pyramid building is best seen by diagrams.

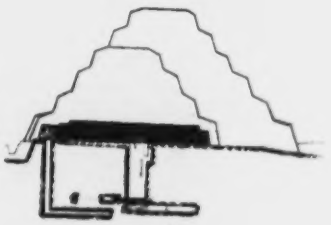
Predynastic: Pit graves, dug into the sand and covered with a pile of rocks, held a naturally mummified body with grave goods. These are found on the edge of the desert.



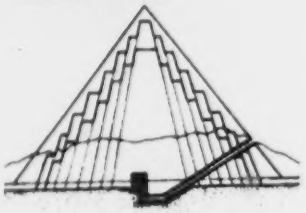
First and Second Dynasties: Mastabas for kings and nobles were made of mud-dried brick in a long, low rectangle to cover a shaft down into the rock. They became increasingly elaborate.



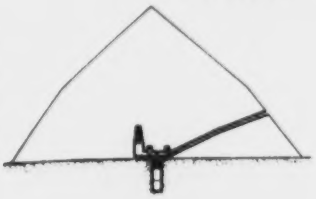
Third Dynasty: Zoser, with Imhotep as his architect, built a stepped pyramid at Saqqara with limestone blocks a little larger than the mudbrick of the mastaba. This pyramid, beginning as a mastaba, was changed about six times during its construction.



Late Third or Early Fourth Dynasty: The pyramid at Maidum went through three phases and had an extremely steep step pyramid at its core. It was encased with limestone that collapsed into rubble. Possibly for Huni.



Fourth Dynasty—The Bent Pyramid at Dashur: The steep angle similar to the Maidum pyramid was changed possibly when the casing slid ("plastic-flow") or perhaps it needed to be completed quickly when King Senefru died.

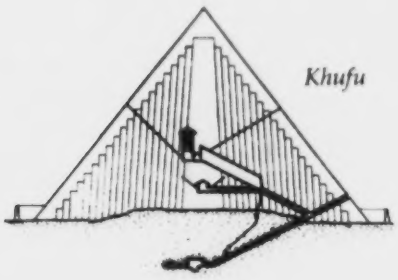


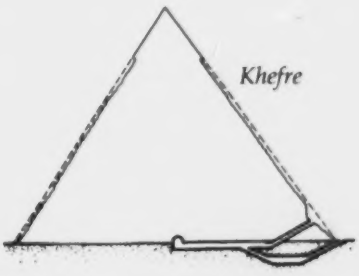
Fourth Dynasty (c. 2575-2465): It is only in this dynasty that we have the massive, yet eye pleasing, famous trio of pyramids popularly called the Giza group. These three, much photographed pyramids, which all have internal passages, were for:

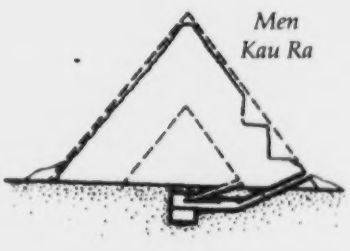
Khufu (Cheops), the Great Pyramid

Khefre (Chephren), with its casing at the apex still in place

Men Kau Ra (Mycerinus), the smallest of the three.







THE PI CONNECTION

There are several reasons why so many measurements of the ancient Egyptian pyramids and buildings show a connection to or $\pi \approx 3.14$ which is the relationship between the diameter and circumference of a circle.

For example if you wanted to lay out a side of a pyramid, say for 500 feet, and had a measuring stick, you might make the stick 10 feet long, and then turn it over and over 50 times. But if you curled the stick into a hoop, and put a bump where the two ends meet, then you could stand upright and roll the hoop, counting off each time the bump came around.

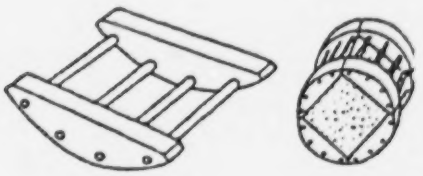
If you always use the same circumference hoops for an even result, then of course, all measurements would be related to pi. They did not need to "know" the value of pi.

HOW WERE THE STONES MOVED?

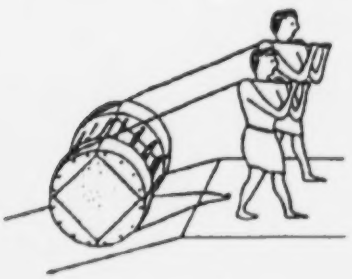
John D. Bush in an article in *Engineering and Science* (volume XLI, number 1) said that the ancient Egyptians had devised a unique way to move stones up ramps to build the pyramids. They rolled them up by strapping wooden cradles around the huge stones. Then you have an easily rollable cylinder. Many such wooden cradles have been found in archaeological sites, but their uses unknown. This method also could have been used at other sites.

After some complicated calculations involving height, weight and time, Bush figured that about 1,000 haulers could have completed the pyramid of Khufu (Cheops) in 20 years. He said his method was 64 times more efficient than sleds or rollers. I'm surprised that this method has not been noticed by more Egyptologists.

Four cradles turn a block into a cylinder.



A large cylinder is easy to roll.



PYRAMIDS

Architecturally, pyramids in Egypt were the culmination of a long evolutionary tomb-building sequence starting with the simple pit graves dug directly into the sand on the edge of the desert above the flood line, and continuing through mastabas, step pyramids and finally to true pyramids.

Since jackals dug down into the soft sand to tear apart and eat the recently buried bodies, more ingenious tombs had to be devised to protect the dead. This practical reason, along with a belief in the afterlife and a need to have your personal belongings with you for eternity, combined to create a demand for more elaborate tombs.

In the first and second dynasties, tombs for kings and nobles were called mastabas or a "bench" in Arabic. Mastabas were long, low rectangular brick constructions built over a shaft into the ground. Sometimes there were several underground chambers. They were often lined with stone.

In the third dynasty, Zoser (Djoser), had a mastaba tomb built for him in the necropolis of Saqqara near the capital of Memphis on the cliffs of the West Bank of the Nile. During his nearly 20-year reign, copper deposits were discovered in the Sinai. He obviously was able to afford something larger and unusual yet keeping with tradition. Imhotep, his architect, designed the first stone structure of such monumental proportions. The Step Pyramid began with a mastaba, shaft and an underground chamber which was lined with blue-green tiled walls in the pattern of bundled reeds. Side additions were built, then another shaft and chamber. The second shaft and room might have been dug to mislead tomb robbers or perhaps for Imhotep's own burial. We do not know. But we do know tomb robbers were successful. All that has remained inside were containers for food and some mummy fragments.

Most important to note is that the limestone was cut to the size of the large mud-bricks used to build the mastaba. The Egyptians were so conservative that, when they changed materials, they kept the stones the same size as the bricks.

The whole area was surrounded by an enclosure wall that was 34 feet high in some places and had a perimeter of about one mile (595 yards by 303 yards). Inside the wall was also a mortuary temple with 48 pillars, each about 16 feet high. The priests were suppose to perform daily rituals here for the cult of the king.

Nearby was a small room, called a serdab, with two eye holes in the wall from which a life-sized seated statue of Zoser could look out and watch the workmen and the priests working. The original statue found here is now in the Cairo Museum, and a copy sits in its place watching the daily parade of tourists.

There were other buildings in the courtyard for the ritual called Heb Sed which seemed to celebrate a certain number of years—perhaps 30—the king was on the throne. It was probably a fitness test since, in order to remain on the throne, the king needed to run the course wearing a special Heb Sed robe and carrying certain ceremonial items. Controversy, so dear to Egyptologists, surrounds the number of years and purpose of this festival. Could it be that if the pharaoh's rule was questioned, he had to prove his physical fitness? or what?

There are other buildings whose purpose is unknown. Outside the wall, there are tombs from nearly every dynasty, but most have been plundered or are in rubble. Yet the Step Pyramid dominates the landscape.

Mastabas continued to be used for nobles and other family members during the dynasties when pyramids were built for the kings.

It was at the end of the third dynasty that a true pyramid was built at Maidum, possibly begun by Huni and completed by Senefru. The "collapsed" pyramid at Maidum is a step pyramid at its core, then buttressed by masonry surrounding the central core. This additional casing modified it to be a true pyramid until it collapsed.

Kurt Mendelssohn's *The Riddle of the Pyramids* (1975) takes the position that the casing stones' weight caused "plastic flow," exposing the inner core of the Maidum pyramid. He believes the angle was too steep, and the outercasing slipped. It would be like stacking apples, and when just one more is added, they all tumble down. He uses, as an argument, the abrupt change in angle of incline of the Bent pyramid, which he thinks was in the process of being built when the Maidum pyramid collapsed. Mendelssohn's thesis has been doubted by George Johnson, "The Pyramid of Medium," *KMT* (Summer 1993). I prefer Mendelssohn's. Since we can examine the skeleton of the pyramid of Maidum, we have an insight into the mind of the ancient Egyptian building engineers. Contrary to popular opinion, the famous pyramids of Giza were not a sudden technological leap, nor do their appearance suggest any foreign stimulation. They are part of a series of trial and error and construction successes and failures.

When we find great exactness of practically every pyramid measurement, it is explainable by the fact that a large crew of skilled surveyors were available during the period of the inundation, and since work expands to fill time, assuredly, the measurements, straight lines and star alignments would be endlessly rechecked and redrawn. All the farmers had to leave their fields for higher ground during the flood, and they, too, wanted to appear to earn their daily distribution of grain and greens (lettuce, onions and garlic). It should not surprise us that all known pyramids are just above the Nile Valley, built high and dry on non-agricultural desert land.

Therefore, a large disciplined work force, which required food and had nowhere to go but into the desert, was at hand to work at least three months of every year on a tomb or temple for a king they considered their god. A comparison would be the known enthusiasm for medieval cathedral building "to the greater glory of God."

This brings us to the issue of slave laborers building the pyramids. The answer involves perspective.

If you were a native Egyptian whose life and work depended on the efficient rule by the king and bureaucrats, and if you accepted the official government position that the king was a god, then you would faithfully perform your construction duties. But if you were a foreigner who wandered into Egypt during a time of famine, drought or crisis elsewhere, then you would resent having to perform your construction duties. The god-king was probably not your god, or even king for that matter.

Another perspective suggest that all Egyptians were in reality only serfs since, in theory, the king owned the whole country and commoners worked their plots of land only because of the generosity of the king. In that case, then working on the king's tomb or temple would be like a tax (or the French corvee for medieval peasants). The ancient Egyptian farmers might go on strike for more provisions or better conditions, but probably not against the idea of working itself.

In either case, the anger of the ancient Hebrews, who arrived in Egypt after the main period of pyramid construction, can be understood in these contexts.

The majority of the stone blocks for the famous Giza pyramids were quarried nearby. Quarry marks are still visible, and where the Sphinx stands now was probably a knob of rock which was also a quarry site until the decision was made to carve the Sphinx from the outcropping of living rock. During the inundation, granite was floated down the Nile on barges because at that time it was possible to deliver the huge blocks closest to the cliffs on the top of which the pyramids were built.

Limestone for the outercasing came from the quarry at Tura, directly across the Nile. This pure white limestone could be polished to a gleaming smooth surface that must have been dazzling. A few authors believe the pyramids were painted with bright colored hieroglyphs or designs.

The top most portions of the Giza pyramids are missing. All three are flat on top, and some believe that a small pyramidal copper structure was stolen from the apex in antiquity. My own guess would be that it occurred during the Assyrian sack of Egypt around 670 B.C.E. We often quote misleading measurements of the height of the Great Pyramid of Khufu because we extend the line of the angle of the pyramid side to where it should be. Since, in reality, the top is missing, we really can't say how tall it was originally.

Modern stone masons from many countries have gone to Egypt and attempted to build a small pyramid to test how it was done. Since our financial and manpower priorities differ from ancient times, and we can't afford to work 100,000 men for three months a year for more than 20 years, we'll never duplicate their effort. On a smaller scale, however, we can test moving blocks without cranes or bulldozers. Some of these experiments have shown that ramps wrapping around the pyramid were probably the most efficient way to transport blocks up the sides of the pyramids. Herodotus, in Egypt nearly 2000 years after the Giza pyramids were completed, says he was told that the pyramids were cased starting from the top. This makes sense if you were covering your ramps as you worked your way down. So pyramids were built from the top down!

The largest pyramid in the world is Khufu's. It has about 2.5 million blocks which weigh from about 2-1/2 tons to about 12 tons each. Approximately 30 feet are missing from the top if you drew hypothetical lines up the sides to meet at the apex. The Arabs used the pyramids as a quarry site of neatly carved blocks and stripped off the white Tura limestone casing for buildings in Cairo.

Tourists today can enter the long cramped passageways and visit several chambers in Khufu's pyramid which have been recently named "the king's chamber," "the queen's chamber" and "the unfinished underground chamber."

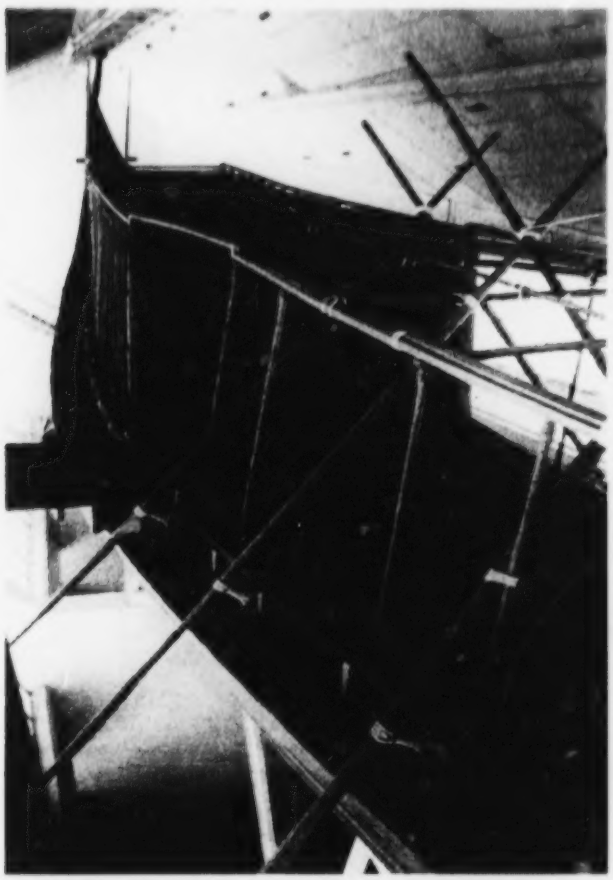
The highest room in the Great Pyramid is called "the king's chamber," and still has a chipped, empty, lidless Aswan granite sarcophagus in place because it is larger than the doorway. Most impressive is the high-ceiling grand gallery which leads to this room.

A difficult narrower passageway leads to the underground unfinished chamber cut out of the bedrock. Standing in the room, both in 1990 and 1992, I thought that the room had been completed at one time, then hacked apart by tomb robbers. After I looked carefully at the photographs I had taken in that room from several angles, I thought I could see two long mummiform shapes with arms crossed over the chests which had been originally carved out of the solid rock to look like coffins. I would not doubt that tomb robbers had chopped at them looking for loot and were disappointed to find them solid stone. I think the deep hole in the floor was also later dug up for a similar reason. The rest of the floor is smoothed. I could not exclude from my thoughts the famous plunderer Giovanni Belzoni who used

gunpowder (TNT hadn't been invented yet) to force entrances to ancient buildings.

You might ask why there are three burial chambers. Probably to misled tomb robbers. Another answer is that one room could have been for valuables and another for the body. So far, all the pyramids we have found have been plundered, and none has had a mummy in it. Possibly mummification hadn't been perfected yet. King Tutankhamon's rich tomb and mummy were not buried in a pyramid but in a rock-cut tomb in the Valley of the Kings near Thebes 500 miles south of the Giza pyramids.

There are other small "air" passages about eight inches square, plus other unexplained features of the pyramid of Khufu too complicated for this short essay. Please see the bibliography for references. Lawrence-Livermore Laboratories, University of California, for example, did some "mu-on" tests on the Great Pyramid to see if they could find any "missing" rooms within the structure, but with no luck. Neither have X-rays or sonar soundings discovered any additional chambers (Fakhry, 1969:259-262).



The large wooden boat was found near Khufu's pyramid and is now in a climate-controlled museum next to the pyramid. Note the cabin, oars and curved hull.

The next largest pyramid, Khefre's, still has its casing near the top, so we can estimate its original dimensions. Neither does it have a "point" on its top. In the burial chamber, the sarcophagus is cut into the floor, and the lid is still in the room.

A completed pyramid complex had much more than the three pyramids. They just dominate the horizon, and so you miss the rest of the buildings, such as an enclosure wall; a valley temple for each pyramid where the body was probably received from across the Nile; the large wooden boat that carried the body; the mortuary temple, where prayers were said daily for the dead king; a covered ramp leading toward the edge of the valley to the mortuary temple; many smaller pyramids for the queens; numerous mastabas for bureaucrats and other royal family members; and, finally, the mysterious Sphinx. At a distance all of this disappears into the tan desert background surrounding the pyramids.

Since the discovery in 1954 of the solar boat buried next to the pyramid of Giza many more full-sized wooden boats have been discovered. Currently on display is the 134-foot-long wooden boat, including the oars, cabin and ropes. It was buried in a stone "coffin" also on display. More were found recently by David O'Connor digging in the archaic necropolis of Abydos near a mastaba. It is predicted that many more will be found in the future since

we are looking for them!

Great controversy surrounds the age of the Sphinx. It has been claimed that it was carved by an advanced civilization living in Egypt between 7000 and 5000 B.C.E. Usually the Sphinx is dated to the fourth dynasty and the king Khefre, about 2500 B.C.E. Robert Schoch, a geologist, argues that the limestone has weathered and deteriorated from a rainy period. Egyptologists Mark Lehner and Zahi Hawass advocate the traditional view, asking where is the archaeological evidence of settlements from that earlier period?

Lehner and Hawass have long been excavating on the Giza plateau, and any articles or books by them are worth reading. Constantly, new information and controversies appear. This essay is too short to even begin to relate the various theories. The major television networks are in the entertainment business, so beware of the slick presentations which are often done on stage sets.

The actual size, complexity and grandeur of this only one of the remaining Seven Wonders of the Ancient World is amazing enough for me. For any intelligent conclusions read several sides, but read with care.

At Saqqara, near the Step Pyramid, is the low ruined mound of the fifth dynasty pyramid of Unas or Wenis. It is important because we can see the first well-preserved carved hieroglyphs on the interior walls. These are called the Pyramid Texts. No earlier pyramids have any serious hieroglyphic inscriptions. I've often wondered if the earlier pyramids had cloth wall hangings with the hieroglyphs embroidered or appliquéd on them. It seems strange that the walls are smooth with absolutely no carvings, and then suddenly the walls of Unas's pyramid are completely carved!

Pyramids continued to be built in the fifth and sixth dynasties, but are usually described by the size of their base rather than their height because today they are rubble or have no surviving superstructure.

Most seventh, 10th and 11th dynasty pyramids are in very bad condition and are rarely studied. But there are a few from the 12th and 13th dynasty that still have some height and are made of combinations of brick and stone. Even the design begins to change, and some no longer look like the pyramids of Giza. For example, one stands on a square base with square columns on all sides; then topped by another smaller similar square; and finally a small pyramid sits on top of it all looking like a wedding cake. This is the pyramid-temple of Nebhepetre-Mentuhotep of the 11th dynasty.

Later builders used earlier buildings as quarries, and so we have many stone foundations, but no above-ground buildings. The pyramid of Amenemhat I (12th dynasty) at Lisht includes sculptured blocks of the Old Kingdom monuments taken from Giza, Saqqara and the valley temples of Khufu and Khefre. It now is about 60 feet high. Ahmed Fakhry says, "I am convinced that more would be gained by dismantling it than by leaving it in its present state. The blocks from temples and tombs of preceding dynasties would be a mine of valuable information for scholars. Dismantling the pyramid would also tell us about how it was constructed" (1969:213).

Senusret II's pyramid at Lahun was made of mud brick with a thin casing of white limestone and was originally about 150 feet tall, but today it is just a high mound.

Near the now ruined pyramid of Senusret III, three cedar boats (about 35 feet long) were found by De Morgan in 1894.

Amenemhat III had two pyramids. One was at Hawara near the Faiyum and another at Dashur. Next to the pyramid at Hawara is the famous labyrinth, part of his temple, and

visited by Herodotus who said it had 1500 rooms above ground and 1500 rooms underground. Amenemhat III's pyramid at Dashur has only its mud-core remaining. Limestone chips surround it; the stone was stolen by local villagers. They even removed the mud bricks.

Tall pyramids had been a beacon to tomb robbers showing where buried treasure was hidden. Some tombs were dug high on the cliff sides facing the Nile as early as the 6th dynasty and during the Middle Kingdom. More are yet to be discovered. Thus, in the 18th dynasty, Tutmose's architect, Ineni, was sent to look for a safer place for a royal tomb searching "with no one seeing, no one hearing." He discovered the Valley of the Kings near Thebes. The tombs were cut into the sides of the cliff to be hidden forever. A natural pyramidal peak looms over the valley which is possibly the reason the place was chosen.

Not actually Egyptian pyramids were the pyramids built by the Kushites in the modern Sudan. The oldest built in the Sudan was for an Egyptian pharaoh of the 25th dynasty, Piy or Pi-ankh-y, c. 730 B.C.E. Others were built near Gebel Barkal, Nuri and Meroe until about 250 C.E. with the fall of the kingdom of Meroe. These pyramids were directly influenced by the Egyptians since the Kushites ruled Egypt and took Egyptian culture home with them.

After everything has been discussed about the size, technology and purpose of pyramids as tombs, the next question should be, "Why?" A mastaba or pit grave was sufficient in the earliest periods, and if the Egyptians were so traditional and, as some authors insist, changeless, then why did they build these enormous stacks of stone? Mendelssohn's answer was that it was to unify the state; it was to give everyone a common goal. I doubt if that was ever consciously thought, but I'm sure the ruling class was aware of the need for united action while they were directing gangs of workers building the mastabas and the Step Pyramid.

Other authors suggest it gave people "something to do" during the inundation. Still others see pyramids as a public works project (WPA) similar to those during America's Great Depression of the 1930s or as a "make-work" project. As usual, the theory you prefer probably tells us more about you than about the ancient Egyptians.

Bibliography:

Pyramids

I.E.S. Edwards, *The Pyramids of Egypt*, 1961.

Ahmed Fakhry, *The Pyramids*, 1969.

Dora Hamblin, "A Unique Approach to Unraveling the Secrets of the Great Pyramids," *Smithsonian*, April 1986.

J. Malek, *In the Shadow of the Pyramids*, 1986.

Sphinx (chronological order)

R. Schoch, "Redating the Great Sphinx of Giza," *KMT*, Summer 1992.

M. Lehner, "The Sphinx Controversy—Another Look at the Geological Evidence," *KMT*, Summer 1994.

Z. Hawass and M. Lehner, "The Sphinx: Who Built It and Why?" *Archaeology*, September 1994.

Boats

Nancy Jenkins, *The Boat Beneath the Pyramid*, 1980.

"Ancient Fleet Discovered in Abydos Desert," *KMT*, Spring 1992.

MUMMIES

Mummification procedures in ancient Egypt varied not only according to the time periods, but they also varied according to economic status. With that warning, I will discuss mainly the highest classes of mummification because they have survived in greater numbers for study, and make only a few comments on the lower classes. We have actual mummies to study from tombs excavated by archaeologists, plus written sources from Greek or Latin writers which could be read much earlier than we could read hieroglyphs (in 1822). Herodotus, the Greek historian, traveled in pharaonic Egypt around 450 B.C.E. or the 27th dynasty, and Diodorus Siculus from Sicily lived in Ptolemaic Egypt between 60 B.C.E. and 57 B.C.E. Both tell us about mummification.

In the 16th through 18th centuries mummies were ground up in Europe to use as a medicine or aphrodisiac "love potion number 9." In the 19th century medical doctors in England would perform "unwrappings" in theaters as an entertainment for well-dressed spectators. In the United States today mummies are discovered languishing in attics, basements, garages and museum storerooms. Many Egyptologists were attracted to the field as children fascinated with museum mummies or from "the-mummy-walks" movies.

In the early predynastic period, dead bodies were "naturally" mummified because they were buried directly into the hot, dry sand of the Egyptian desert plateau. The contact with the sand and the dry climate perfectly preserved the body. Some of these are on display in museums, especially one in the British museum on the second floor. The body is in a "flexed" position, that is, with the knees bent as if in a "womb to tomb" transition. The body might be wrapped in skins or textiles. Gravegoods, such as jewelry, pottery, food, needles, tools or weapons, are found near the body in the pit. Then stones were piled over the grave.

Accidental discovery in antiquity of these well-preserved bodies may have led to an early belief in the afterlife. By dynastic times, death was not thought of as an ending to life, but as a gate to eternal life.

In the dynastic archaic age, poorer people continued to be buried in the sand, but elites began to be buried in stone or brick-lined tombs dug into the ground, perhaps as a way to prevent the jackals that roamed the cemeteries from digging up freshly buried bodies and scattering the parts. This must have been significant since the priests of Anubis, the jackal, became the embalmers who cut open the body and removed the internal organs in the mummification process.

These tombs dug into the bedrock were called mastabas which means a bench in Arabic. Now that the body was no longer in contact with the sand it decayed, and they probably used experimental methods to achieve artificially what had been done naturally. Isn't that human?

The dead body was brought to the priests of Anubis who placed the body on a narrow bed which we still see depicted in full color on tomb walls. The internal organs mostly likely to decay were removed first. A long metal hook was pushed up through the nostrils and

shaken to dislodge the brain tissue. After the liquid was drained, the tissue was discarded since they believed the brain was just "stuffing" between the ears. I do not jest. Herodotus noted that an incision was made on the left-hand side of the abdomen with an "Ethiopian stone" of black obsidian. The internal organs were set aside to dry before being placed in a container or canopic jar which was named for the place it was first discovered, Canopus. Each jar was named for a son of Horus: Imsety held the liver; Hapy, the lungs; Duamutef, the stomach; and Qebhsenuef, the intestines. Four goddesses—Isis, Nepthys, Selket and Neith—protected the shrine in which the viscera were placed.

Canopic Jars

Duamutef *Stomach* | *Qebhsenuef* *Intestines* | *Imsety* *Liver* | *Hapy* *Lungs*

Sometimes the viscera were wrapped and returned to the body cavity. The heart was suppose to remain in the body, but due to carelessness of the embalmers it is sometimes missing. The heart was thought to be the seat of human intelligence.

The body meanwhile was packed with a naturally found substance called natron. It took 40 days to "cure" a body. Natron is found at Wadi Natrun 50 miles west of Cairo.. Natron is a mix of sodium carbonate, sodium bicarbonate, and sodium sulfate from water evaporation which leaves the chemical deposit on the surface. It is similar in texture and purposes to bicarbonate of soda (baking soda) which can be used in a refrigerator against orders and humidity. Our chemical notation of "Na" for sodium comes from the Egyptian word natron.

The combination of the natron and the exceedingly dry climate accelerated the 70-day mummification process. The body was next painted with resins and the cavity packed with various materials, depending on your economic status. "Padding" was added to restore the areas that had sagged during the drying process, such as women's breasts and men's genitals. This shape is referred to as mummiform or anthropoid. Plaster or glass eyes might be inserted into the sockets. Linen strips two to eight inches wide were used to wrap the fingers and toes until nearly 20 layers of bandages encircled the body. Sometimes religious texts, prayers or the dead person's name were written in ink on the bandages. Amulets often in the form of jewelry were wrapped into the strips while special prayers were chanted to ensure the powerfulness of each amulet. This is called the apotropaic utilization of amulets.

The embalmers could be careless, and a stray toe, finger or ear was sometimes lost during the process. If there was a missing arm or leg, wood might be used to replace it.

After the wrappings were painted with pitch to hold them in place, then a ceremony called "Opening of the Mouth" took place. The priest of Anubis forced a wedge near the mouth which meant the mummy could speak, eat and drink forever. In the tomb of Tutankhamon was the phase: "He who speaks the name of the dead causes him to live again, it gives breath to he who has vanished." A death mask was placed on the face or over the head. The masks were later just wooden panels with a portrait on it painted in colored wax called "encaustic."

Coffins made of wood, papier maché (cartonnage) or solid gold as King Tutankhamon's were shaped as the mummy. These mummiform coffins could be nested one inside the other or placed inside a rectangular wood coffin or stone sarcophagus.

As with most things, how much you paid determined the size, quality, materials and art. Diodorus Siculus (60-57 B.C.E.) says the most expensive process in his day cost 66 pounds of silver (one talent), and a moderate one cost 20 pounds of silver (20 minas). I wonder what the bargaining was like?

The tomb for the wealthy or the coffin for others was considered "the house for eternity," and it was the residence of the ka (second-self or invisible-twin). It needed to be fed and sheltered. The coffins often had eyes painted on the side so the ka could look out at the world. The ba, or spirit, was released from the body at death and took the form of a bird with a human head or the Ba-bird.

In order to safely progress into the world of eternity you had to pass a test by the gods to show you had lived an honest life. Scenes on "The Papyrus of Ani" in the British Museum show the priest of Anubis escorting the deceased, Ani, to the judgment. Thoth, the ibis priest of wisdom, recorded the answers as the person's heart was weighted in a balance scale against a feather of Ma'at, the goddess of order, balance, justice and truth. If you were good and "light of heart," then you passed, but you failed if your "heart was heavy." If successful you were brought into the presence of Osiris. If you failed your heart was thrown to a monster called "Ament" who was part lion, part crocodile and part hippopotamus.

But there's always a handy "cheat sheet" or guide to help you succeed—the *Book of the Dead*, as it's now known, was actually called *Coming Forth Into Day*. It contained spells and answers to get you into the next world. The first are found on the walls of the 5th dynasty pyramid of Unas (Wenis) and called the *Pyramid Texts*. By the Middle Kingdom these spells appear on the interior coffins and called the *Coffin Texts*. In the New Kingdom they are found written on papyrus like that of Ani's and were placed with the mummy in a coffin or pit.

There were funeral processions with relatives, professional mourners and priests. The tomb might be stocked with whatever the owner valued such as food, furniture, tools, jewelry, statues, and small carved workmen called ushabti or shawabti. The ushabti could be called on to replace you for eternity whenever you were asked to work. The desired number was 365, one for each day of the year, plus 17 foremen. Paintings on the walls and carved reliefs could augment the articles or substitute for them since paintings, statues and hieroglyphs could be magically transformed into reality. Wealthy people could afford both statues and paintings to perform services for them such as making bread and beer, working in the fields or making gold necklaces.

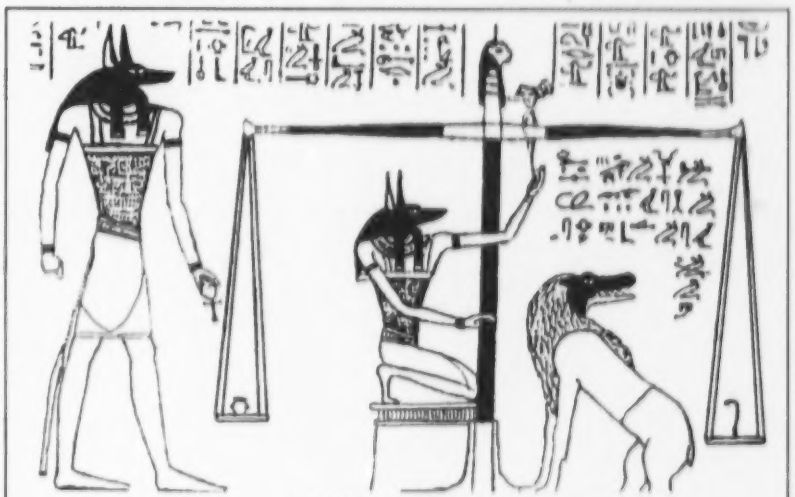
You could "take it with you."

Priests were paid to say prayers, and the family maintained the tomb. Older tombs, however, were neglected, and tomb robbers were at work almost immediately. Papyri from 19th-dynasty documents tell the names of the tomb robbers, their official allies, and the punishments. King Tutankhamon's tomb was entered probably not long after his burial.

Mummified animals number in the hundreds of thousands. They were used as votive offerings (gifts) to the god related to the animal, such as cats for Bast, hawks for Horus, or crocodiles for Sobek. Most museum collections have some since they are so common.

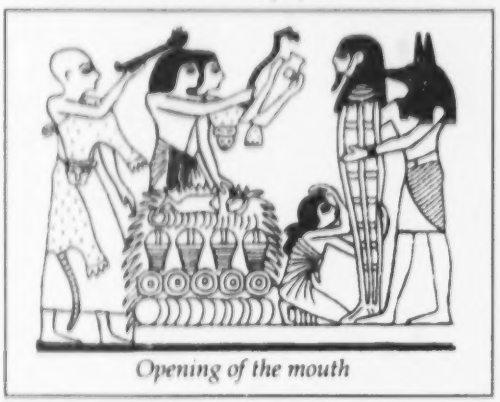
A new era of studying the actual mummies began with the use of modern X-ray equipment, CAT scans and studies of DNA, hair, blood, tissues and teeth. Of the many new methods, the most important idea is non-intrusive investigations. This means that the mummy need not be unwrapped and, therefore, "ruined." In the future, tests and probes will provide even more information.

There are many experts working with these new tools. The best accessible books are James Harris and Kent Weeks, *X-Raying the Pharaohs* (1973), and James Harris and Edward Wente, An *X-Ray Atlas of the Royal Mummies* (1980). Short articles are published almost weekly in popular magazines and newspapers. Not only do they study the bones, jaws, teeth, etc., but also articles packed inside the body cavity and amulets wrapped in the mummy. There are new studies of the parasites in the intestines and other tissues, and of DNA links to other "relatives." We have begun to wonder if some mummies ascribed to a "family" are mismarked (someone else's) since they share no genetic codes, blood groups or other known physical relationships to their other family members. Were they adopted? or mixed-up by the priests of Anubis?



Weighing of the heart

In fact, it was discovered that some so-called mummies of people or animals have no body inside the wrappings. So great was the demand in Europe for ancient mummies that some must have been manufactured for export. The theatrical "unwrappings" sometimes had to be canceled, and tickets refunded, when a doctor found an empty interior as he unwrapped the supposed mummy. Now we can X-ray the mummy and discover the fraud. This is especially true for the animal votive gifts. A believer visiting the temple purchased a mummy to donate to the god. Perhaps they knew that the shaped mummy was empty, and they saw the gift as purely symbolic. Maybe only the actual animals who lived inside the temple walls, or a family pet were brought to the embalmers; otherwise, the empty mummy was just considered a donation to the temple.



Opening of the mouth

The one thing we can be sure of is that new studies and methods will supersede our present knowledge of the subject of mummification since we are so fascinated with the subject to keep investigating further.

Bibliography:
Carol Andrews, *Egyptian Mummies*, 1984.
Rosalie David, *Mysteries of the Mummies*, 1978.
James Harris and Kent Weeks, *X-Raying the Pharaohs*, 1973.
James Harris and Edward Wente, *An X-Ray Atlas of the Royal Mummies*, 1980.
Mummies and Magic, The Funerary Art of Ancient Egypt, Museum of Fine Arts, Boston, 1988.
University of Pennsylvania Museum, *The Egyptian Mummy, Secrets and Science*, 1980.

THE MIDDLE KINGDOM

Reliable historical information about the First Intermediate Period (7th, 8th, 9th and 10th dynasties) is completely lacking. Manetho said that the seventh dynasty had "70 kings in 70 days," but that is obviously alliteration. Local nome leaders challenged the authority of the king, and the period is one of weak competing princes with none able to prevail over the others. We can conclude that the divinity of the pharaoh was questioned. It was a society where Ma'at (justice, balance, the ideal) was no longer present as seen in *The Lamentations of Ipuwer* where "the world spins around like a potter's wheel ... Public offices lie open and their records have been stolen." Revolution, and then civil war between the competing dynasties, had an intellectual impact with a philosophical literature developing as a result. High literary standards were established in the Middle Kingdom which followed.

Energetic rulers from Thebes unified Egypt, and the kingship was centralized by Mentuhotep of the 11th dynasty. There was much building activity with new quarries opened in Wadi Hammamat and the Red Sea route activated. The opening of a quarry required a ritual act by the king and so was recorded. The reason is better understood when you know that the hieroglyphic word for quarry and womb were the same. Mother earth was being opened. The Nile flood and annual renewal of the silt (top soil) had religious meanings. New temples were built for the worship of Amon, the boundaries of Egypt were secured, and the beginnings of a standing army were evident from models of wooden soldiers—40 Egyptian spearmen and Nubian archers neatly lined up—which were discovered in 1894.

Amenemhat I, the vizier (prime minister) of the last king of the 11th dynasty, founded the 12th dynasty. He came from Elephantine Island at the first cataract. The transfer of power seems to have gone smoothly. He moved the royal residence from Thebes to near Memphis. This was a period of great prosperity, and he made his son Senusret (Sesostris) his co-regent for about 10 years. While Senusret was gone of a desert campaign, his father died. He swiftly, and unexpectedly, returned, took the throne and reigned for 35 years. "The Story of Sinuhe" was the literary narrative of the event with the hero, Sinuhe, fleeing for fear of being thought guilty of Amenemhat's death. He became rich and famous in exile but longed to return to Egypt. On request, Senusret granted him a pardon so that he could return for a proper mummification and burial in Egypt. The story became the basis for the 1949 novel *The Egyptian* by Mika Waltari, and then it was made into a movie.

Senusret II's tomb contained a large amount of gold jewelry, evidence of prosperity and craftsmanship of the period. Under Senusret III, Egypt's rule was extended to the second cataract, land was reclaimed in the Faiyum, and trade missions were sent to Punt, Byblos and Crete.

The dynasty ended with a woman on the throne, Sobek-Nefraura, "the female Horus, beloved of Ra." An echo of the 6th dynasty. Probably the royal family had died out. The term Second Intermediate Period signals to us that several men are contending for the kingship and although there seems to be a continuity into the 13th dynasty, troubles loomed ahead.

Reading:
P. Clayton, *Chronicle of the Pharaohs*, 1994.

WOMEN

Generalizations about three thousand years of ancient Egyptian women's history must be inaccurate, and this is even more complex when our sources are limited. With those cautions, it still can be said that women in both pharaonic and Ptolemaic Egypt had more rights than women in other places of their time. Although they had many of the same legal rights as men, such as land ownership, inheritance, right of divorce and legal standing in court, they did not seem to hold official positions as scribes, bureaucrats or soldiers. A very few women became rulers: Neith Aqert, Sobeknefrura, Hatshepsut, Tausret and Cleopatra VII. Some queens—Hetepheres, Ahotep, Tiye, Nefertiti and Nefertari—were very influential.

Much of what we know comes from private letters, wills, property deeds, tomb inscriptions, poetry, literature, and our interpretations of wall paintings. We find that respectable women held jobs outside the home as wigmakers, textile workers, perfumers, or midwives. Some sold their garden produce or made beer and bread. We can still see artistic representations of women together with men, sometimes working alongside men in the fields, or as guests relaxing at banquets with men, or performing together as dancers, entertainers and musicians.

The most common title for women was "mistress of the house" which was a title similar to "Mrs."

Men were respected for age and wisdom, but in tomb art even a man's mother was shown young. Art depicted an ideal view, and so we might not know the reality.

Monogamy was usual for most marriages, and marriage meant that a new household would be established separately from the parents'.

Another way to view women's importance could be by studying goddesses and priestesses. Hathor, Neith, Nepthys and Isis were worshipped in the earliest periods. Hathor, shown as a cow, and her priestesses, with cows' ears and a sistrum, probably was a predynastic goddess for a cattle-raising culture. She was also prominent on the Narmer Palette. Isis became more popular with her son Horus in the early dynasties. Nut, Bast, Sekhmet and Tuart all had their special temples and followers. These were not subsidiary or minor deities.

The sky goddess, Nut, was unusual since it was more common for a male to control the skies and for women to be associated with "mother-earth." This reversal may indicate a different relationship between men and women in ancient Egypt.

Old Kingdom mortuary priestesses were often hereditary, and daughters received the same payment as sons. By the New Kingdom many women recorded their temple positions on tombs. After the 21st dynasty, the power of the priestesses of Amon in Thebes grew.

Although no codified laws survive, women bought, owned and sold slaves; borrowed and loaned money; disinherited her children; sat on local tribunals; acted as an independent entity; sued; adopted children and owned land. Ptahotep's warning from the Old Kingdom, "Do not contend with your wife in court," has a modern message.

Bibliography:
Susan Hollis, "Women of Ancient Egypt and the Sky Goddess Nut," *Journal of American Folklore*, October 1987.
Lise Manniche, *Sexual Life in Ancient Egypt*, 1987.
Gay Robins, *Women in Ancient Egypt*, 1933.

WHO WERE THE HYKSOS?

The term Second Intermediate Period (c. 1785-1570 B.C.E.) again indicates to us that this was a terrible time, not only in the actual events but in the quality of our sources. The 13th and 14th dynasties overlapped in a tangle of names, dates and chronologies (Trigger, 1983:149-154) which I won't try to explain here. Fragmentation was a key word for what was happening.

The 15th and 16th dynasties were called the Hyksos by Manetho writing in Greek in the third century B.C.E. The Egyptian word was "Hekau kehset," meaning "Rulers of foreign lands," a term they applied to all foreigners, and so it gave no indication of their ethnic source. From their names, we can conclude that they were Semites. They equated their god, Ba'al, with Seth, and Anant with the goddess Hathor (Redford, 1992:117). The cult of Seth, however, had existed earlier, and a 19th-dynasty pharaoh, Seti I, would also take the name of the god Seth. So the fact that they took the god of confusion, sterility and the desert should not be too disturbing to us.

Donald Redford believes there was a true military conquest which took advantage of the fragmented and weak 13th dynasty. In revenge, the later 18th dynasty destroyed the monuments and inscriptions of the Hyksos, and, therefore, the sources are few, damaged, and often the 18th dynasty's version of the events. What little archaeological materials we do have are mainly from such sites as Tel el Dab'a, Tel Yehudiyeh and Tel el Maskhuta in the eastern delta. The excavations show articles originating in Palestine and Phoenicia from the Middle Bronze Age II (c. 1700 B.C.E.). Semites had been slowly infiltrating into the area during the Middle Kingdom and gradually rising from being servants to becoming scribes and administrators after several generations of assimilation. There's archaeological evidence for a large number of peoples from Palestine and Phoenicia in the delta during the 13th dynasty (Trigger, 1983: 155-156). In fact, it looks as if there was a migration of a whole community already urbanized (Redford, 1992:102).

The Hyksos, ruling from Avaris, quickly Egyptianized. They used the royal titles, compounded their own names with the god Ra, added their names to kingly statues, appeared as pharaohs in art, put their names into a cartouche and on scarabs. But they made no inscriptions, that we have so far found, in their own language. Perhaps they were all erased or destroyed by the 18th dynasty. In contrast, the Turin King List, uniquely, did not use a cartouche around their names and used the determinative for "foreigner" (Trigger, 1983:156). Their foreignness left a deep impression.

"A blast of God smote us, and unexpectedly, from the regions of the East, invaders of an ignoble race marched in confidence of victory against our land" (Manetho, frag. 42).

This quotation suggests to me that the Egyptians believed that the conquest of the northeastern delta would be easy for the Hyksos because there were already so many of their own countrymen living in the area who could have harbored spies, aided the invaders, and stirred up revolt among the people against the Egyptians. The military operations followed the earlier peaceful settlements. There are many modern parallels for this.

Manetho's fragment continues: "By main force they easily overpowered the rulers of the land, they burned our cities ruthlessly, razed to the ground the temples of the gods, ... and led wives and children into slavery." From a Palestinian perspective, there was great prosperity in the nearby fortified cities and military camps which could be the bases from which the Hyksos came (Trigger, 1983:158). The brutality of the invasion was used as an

excuse by the 17th dynasty centered in Thebes to attack the delta. Even as late as the 18th-dynasty reign of Hatshepsut, she would claim, unhistorically (but who cared?), that she restored order in the land after the rule of what she called "a nomad group." Without a doubt, the 18th dynasty's inscriptions were political propaganda to rally their followers, but yet it held some truth. The Hyksos were a destructive interlude, and yet they produced the innovations of the period that could be utilized by the Egyptians themselves. The harnessed horse and chariot, scale armor, composite bow, and new designs for daggers and swords were introduced.

Several authors have attempted to fuse the Biblical story of Joseph (Genesis 37-50) into this period. Cyril Aldred thought that the story could be an example of how many Semites arrived in Egypt (1961:123). Briefly, Joseph was sold into slavery by his brothers to a passing Egyptian merchant. In Egypt, Joseph successfully interpreted the dreams of the pharaoh and rose to become a chief adviser. It is tempting to have the Hyksos one of the tribes of Hebrews wandering into Egypt as told in Genesis. W.F. Albright recognized that the sojourns in Egypt were a "vital part of early Israelite historical tradition, and cannot be eliminated without leaving an inexplicable gap" (1940:242). He pointed out that the Israelites were settled close to the Hyksos capital in the delta near Tanis. "Most striking is the obvious relation in which the Joseph story and the later history of Israel in Egypt stand to the Hyksos movement. The 'king who knew not Joseph' and who oppressed the Israelites should be a pharaoh of the New Empire, after the expulsion of the hated Asiatics" (Albright, 1940:242). Redford disagrees. He says that it is a typical Middle Kingdom "rags to riches" composed story, and "to read it as history is quite wrongheaded" (1992:429). What do you think is the answer?

Many of our modern visuals about ancient Egypt come from the movies and television. If we read the Bible from an Egyptian perspective, then some visuals do not fit the actual writings. For example, Abraham left Ur of the Chaldees (southern Iraq) around the 19th century B.C.E., and he led his people "into the land of Canaan." This would be during the 12th or 13th dynasties. The pyramids of Giza, which are usually shown in the background in the movies, were built during the 4th dynasty and so, using the actual Biblical source, they could not have built the famous Giza pyramids.

Another interesting reversal of perspective involves the story of Abraham and his wife Sarah who travel into Egypt. Sarah is given the Egyptian woman, Hagar, as a servant. We have a tendency to overlook who was the servant of whom since we have the movie version of the ancient Hebrews being whipped by their Egyptian masters. Hagar is also the mother of Abraham's eldest son, Ishmael.

None of this was mentioned in the ancient Egyptian sources of the period. Most likely this is because they were never recorded since the ancient Hebrews were an insignificant nomadic group who wandered in and out of Egypt at various times. It is not until the 19th dynasty pharaoh Merenptah that we get the first mention of them. Israel did not become a kingdom until around 1020 B.C.E. or the 21st dynasty. The relationships between ancient Egypt and the ancient Hebrews has a long and complex history.

Bibliography:

W.F. Albright, *From the Stone Age to Christianity*, 1940.
C. Aldred, *The Egyptians*, 1961.
D. Redford, *Egypt, Canaan and Israel in Ancient Times*, 1992.
B. Trigger, et al., *Ancient Egypt, A Social History*, 1983.

THE NEW KINGDOM

Just a list of the highlights of this period would fill the whole page, and so a few generalizations will be made to introduce the following articles.

The 18th, 19th and 20th dynasties were definitely a Golden Age for Egyptian civilization. The hated Hyksos were defeated and pushed back into the northeast. This military effort of the 17th and early 18th dynasties meant that there was a standing army to be accommodated. As a result, numerous campaigns were made into the ancient near east (what is today Israel and Syria) and south into Nubia.

The term pharaoh became popular during this period. Pharaoh actually means Great House. It was used in the same way a reporter might say, "The White House says ...." We can infer there was a large palace bureaucracy. Prior to the New Kingdom, the word king was used.

Domestic and foreign policies were both strong, and the administration that was established endured for about 500 years. For most of the period there were close ties among the rulers, army and priests. Hatshepsut needed the support of the priests of Amon to stay in power, and she kept the army busy. Trade missions south into Nubia and Kush made Egypt rich in gold. Akhenaten challenged the power of the priests and the army. He nearly lost all of Egypt's hard-won empire since he was either a pacifist or inept in foreign affairs. Then he challenged the power of the priests of Amon by supporting the solar disk cult of the Aten. He was, however, never able to fully suppress the other cults, and, when he died, Egypt reverted to the old ways.

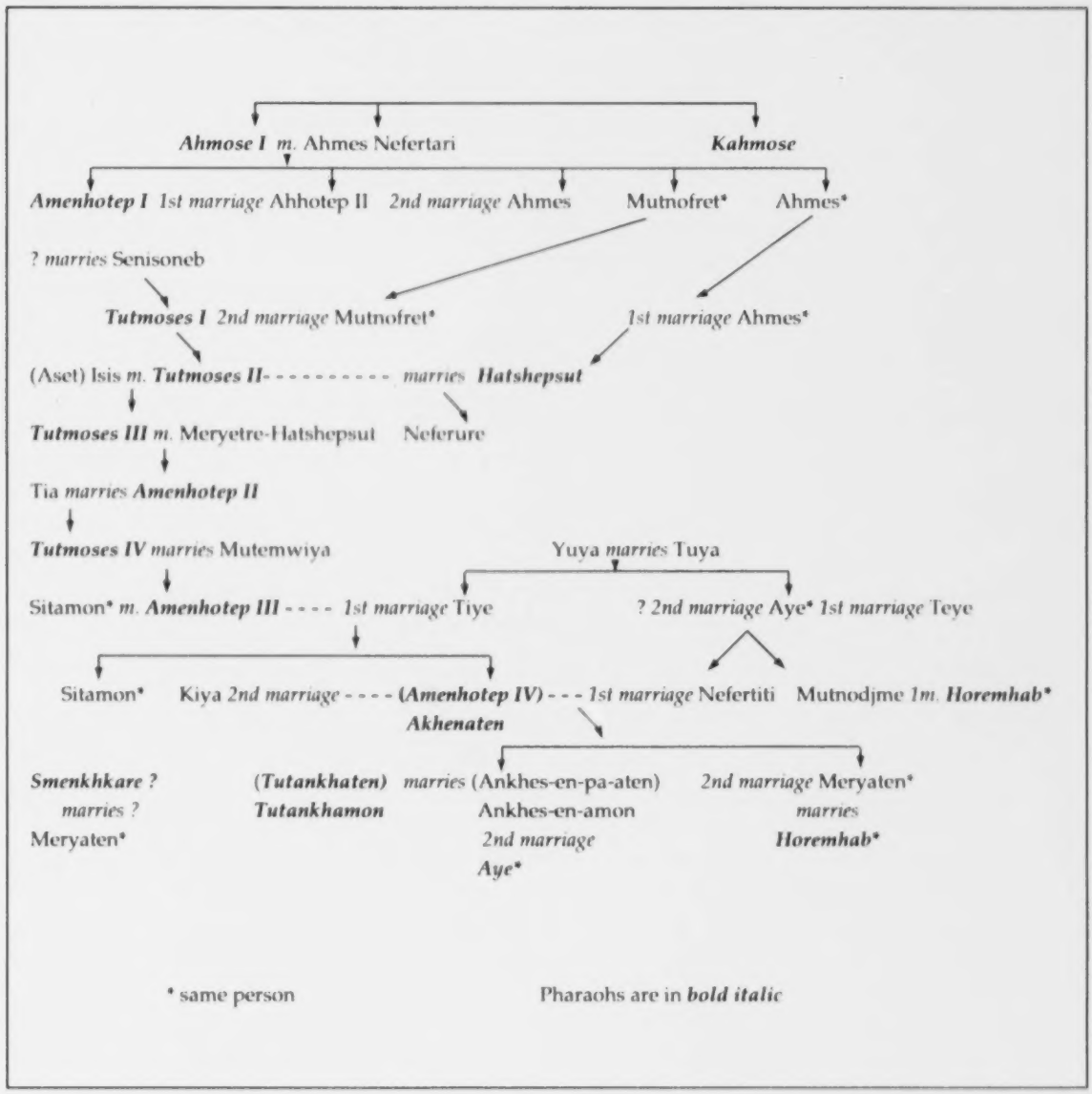
Although the artifacts and the gold in the famous tomb of Tutankhamon attracts attention, he was a minor pharaoh who, after ruling for about 10 years, died before he was 20 years old. One of his generals, Horemhab, ends this dynasty.

Between Horemhab and Seti I, the empire was not only restored but enlarged. The 19th dynasty's Ramses II surpassed them all, not only in his 67 years of rule but his numerous monuments and sons. He boasted about his military victories on the walls of his temples.

During the 20th dynasty, the high priests of Amon became even more powerful than before. Ramses III had to repel invasions of the Sea Peoples who had brought down the Hittites. There were economic difficulties and scandals about tomb robbing in the Valley of the Kings. This was when many mummies of the 18th and 19th dynasty pharaohs were rescued from their tombs and moved to a secret hiding place for safety.

Bibliography:
N. Grimal, *A History of Ancient Egypt*, 1988.
D. Redford, *Egypt, Canaan, and Israel in Ancient Times*, 1992.

POSSIBLE GENEALOGY 18TH DYNASTY



Title: Pharaoh.
Gods: Amon and Aten.
Capital: Thebes and Akhetaten (Amarna)

- Queen Tiye could be Tutankhamon's mother
- Tutankhamon and Akhenaton may be brothers

Bibliography:
J. Harris and Wente, *An X-Ray Atlas of the Royal Mummies*, 1980.
A. Kozloff and Bryan, *Egypt's Dazzling Sun*, 1992.
N. Reeves, *The Complete Tutankhamun*, 1990.

64

HATSHEPSUT

Hatshepsut reigned as a pharaoh for about 22 years. Women had ruled before her: Neith Aqert at the end of the 6th dynasty and Sobek-Nefrura at the end of the 12th dynasty. Both ruled for a short time and were probably the only survivors of the family line.

Hatshepsut's father had been a pharaoh, and her mother was the sister and wife of a pharaoh. So Hatshepsut was royal on both sides of her family. She was married to her half-brother, Tutmose II, and they had a daughter, Neferura, but Tutmose II also had a secondary wife Aset (Isis) who had a son, Tutmose III. When Tutmose II died after ruling about 12 years, his very young son inherited the throne. Tutmose III was probably eight years old. He obviously needed help, and Hatshepsut became a co-ruler which would not have been unusual if she had been a man. Within two years, states an inscription of an official, she "controlled the affairs of the land."

At first, she had continued to call herself "the king's wife" and wore the appropriate insignia. She was a co-ruler for a prudent amount of time and then ruled by herself. We are able to see the changes in the art. She wore a false beard, male clothing and kingly regalia, as required. Perhaps the clothing was sacred or for official ceremonies such as judge's robes or mortar boards at graduation or green surgical gowns all of which were originally meant for men but worn by women when they perform those activities. She was shown as a Sphinx wearing a false beard. We know this because her cartouche is carved on it. In her temple, Deir el Bahri, she is shown drinking from the udder of the cow-goddess, Hathor.

The titles king or pharaoh were male terms; they were not gender free as the words ruler, co-regent or the crown. After Year 2 of her reign she took the title "female Horus" and the five names and titles as a pharaoh. She stopped using any titles of a queen. Her throne name, Maatkara, meant "Truth is the body of the sun." This was appropriate since Maat was the female goddess of justice and balance. So fitting for what we know of Hatshepsut's rule.

She clearly believed that she deserved the throne because of her lineage, and stated that her father had chosen her as his successor. She probably convinced herself that the god Amon-Ra had disguised himself as Tutmose I and then impregnated her mother, Ahmose (Ahmes), as we are told in inscriptions of her time.

She cultivated the priests of Amon, and gave them gifts of large estates and gold. In turn, they supported her claims to the throne. Nothing unusual in that. She kept military exploits at a minimum with minor campaigns in Nubia. She bragged in one inscription that she sent men on trade and diplomatic missions, not to war. In another, she claimed that gold was weighed by the basketful rather than by what we would call the ounce. On the walls of her wonderful temple, Deir el Bahri, built against the cliffs near Thebes, a relief shows the arrival of the overweight queen of Punt (modern Somalia) bringing gifts of incense. I can imagine the long conversations about the problems of governing, and it was an excellent opportunity for the army to travel to Punt as an excuse for military intelligence. We still have congressional junkets to foreign countries for "fact-finding."

She also engaged in many building projects, such as her famous temple of Deir el Bahri traditionally ascribed to Senenmut as architect, although he is never given that title. She also built the Red Chapel which was dismantled after her death. She is shown making offerings directly to the gods (usually only for a male pharaoh) at Karnak, and she also ordered two 98-foot obelisks for the Karnak temple in Year 16 of her reign.

One of the inscriptions says:

> Those who shall see my monument in future years, and shall speak of what I have done, beware of saying "I know not, I know not how this has been done, fashioning a mountain of gold..." Nor shall he who hears this say it was a boast but rather "How like her this is, how worthy of her father."

She knew that kingship depended on myth, rituals, lineage and success. Her father's sarcophagus was moved into her tomb in the Valley of the Kings. She planned to spend eternity with her father. Her inscriptions rarely mentioned her husband or co-ruler.

She had planned to dig a tunnel from her temple directly through the hills to her tomb, but some poor quality rock caused the project to be abandoned. All these construction projects stimulated the economy.

She carefully chose officials who agreed with her. Her most important adviser was Senenmut, a man of obscure origins. He was the tutor to her daughter, Neferura. Although Tutmose III was close to her age, we do not know who his tutor was. Several statues survive showing Neferura seated on Senenmut's lap and wrapped in his cloaked arms. Another is a block sculpture with their two heads "floating" on top, and the sides of the block are inscribed with hieroglyphs.

Senenmut was chief steward of Amon and his other titles seem to make him Overseer of Everything Important. He never married, and he was permitted the unusual honor of burial in the area of Hatshepsut's Temple near Thebes.

Meanwhile Tutmose III was growing older. Was he planning to just await her death? He had been assigned military duties while she was still alive. So did she fear he wanted the throne?

Since we do not know if we have her mummy, we do not know details about her death, but she was probably around 50 years old when she died on the 10th day of the 6th month of the 22nd year of her reign (early February 1482 B.C.E.).

Did Tutmose wait until she died a natural death? Or did he push her aside? Contrary to popular opinion, he did not immediately erase inscriptions of her reign, but he did finally remove her name from the King Lists. Did he wait until her more powerful advisers died? It was believed that Tutmose III achieved the throne by marriage to Neferura, but recently it was discovered that Neferura predeceased her mother.

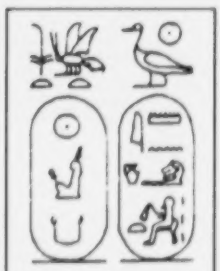
Tutmose III now made 17 campaigns into the ancient Near East and Syria in order to restore lands lost there and to conquer more.

He did surround her obelisks with walls which, ironically, helped preserve them. He replaced, altered or destroyed most of her reliefs at the Deir el Bahri temple with his own and added another south of the site. Further damage to her temple was done by Akhenaten who chiseled out the name of the god Amon. Some restoration was done by Horemhab, and then, in the 21st dynasty, it was used as a necropolis. The Coptic Christians used the temple as a monastery (El Deir). Every time the building was reused, it was altered and the blocks moved and reused. Currently, it is being restored by a Polish archaeological team.

Did Hatshepsut's reign influence the other powerful women later in this dynasty? A statue of Queen Tiye and her husband Amenhotep III show the two of equal size. This colossal statue is from his mortuary temple in Thebes and is today in the Cairo Museum. Tiye held the position of the king's principal wife throughout Amenhotep III's reign, and she is shown in his Heb Sed scenes. She began the use of the horns and sun disc of Hathor on her headdress.

The obelisk of Hatshepsut in the Temple of Karnak. The monolith of pink Aswan granite was nearly 100 feet tall.

But it is with Nefertiti that a queen appeared as frequently on monuments not only with her husband, but alone. During the reign of Akhenaten, the traditional gods were ignored and a new emphasis on the Aten cult began. He also moved the capital from Thebes to Akhetaten (Amarna). A recent computer reconstruction of the temple showed Nefertiti making offerings directly to the Aten without Akhenaten present. Individuals prayed directly to Nefertiti. She also wore various kingly crowns and some believe she was the "brains behind the throne." Her name means "the beautiful one has come."



Hatshepsut

Julia Samson believes Nefertiti was actually a co-regent with Akhenaten under the name Smenkhkare.

In the 19th dynasty, the wife of Ramses II, Nefertari, aided her husband in writing diplomatic letters to the Hittites, and she had a temple built for her alongside the larger one for her husband at Abu Simbel in Nubia.

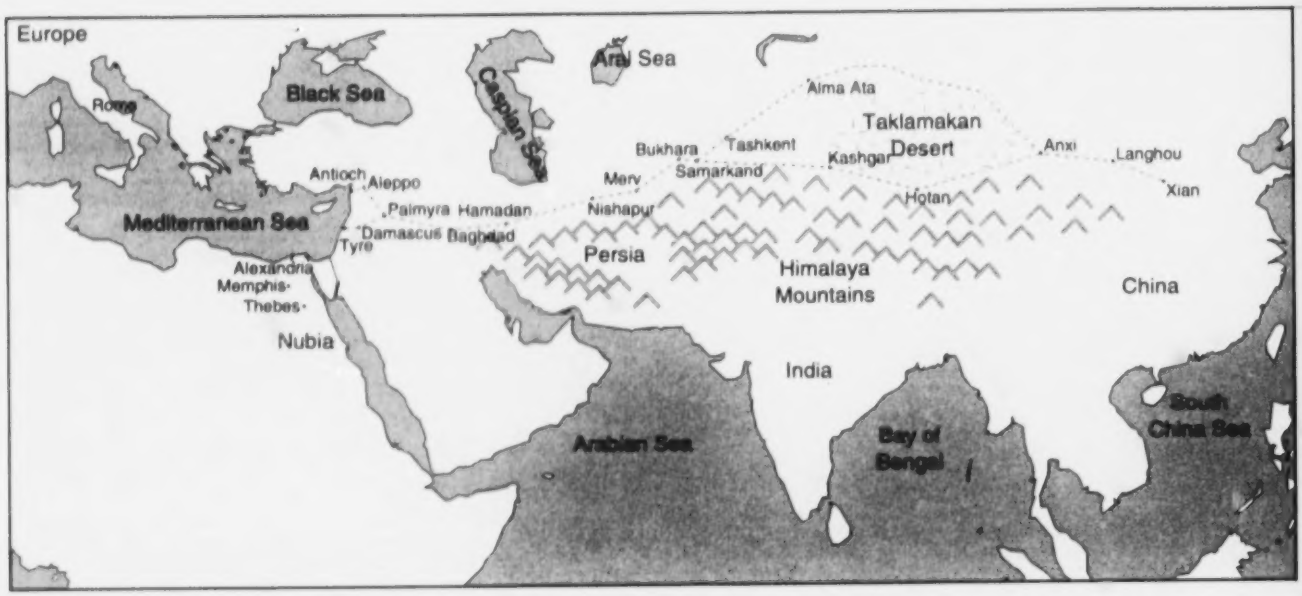
We wonder what tales, myths and histories about Hatshepsut circulated, perhaps orally, long after her death. She was surely not forgotten. Herodotus, the famous Greek historian and traveler to Egypt around 450 B.C.E., said (among many other things):

> The Egyptians in their manners and customs seem to have reversed the ordinary practices of humans. For instance, women attend the market and are employed in trade, while men stay at home and do the weaving (Book II, 35).

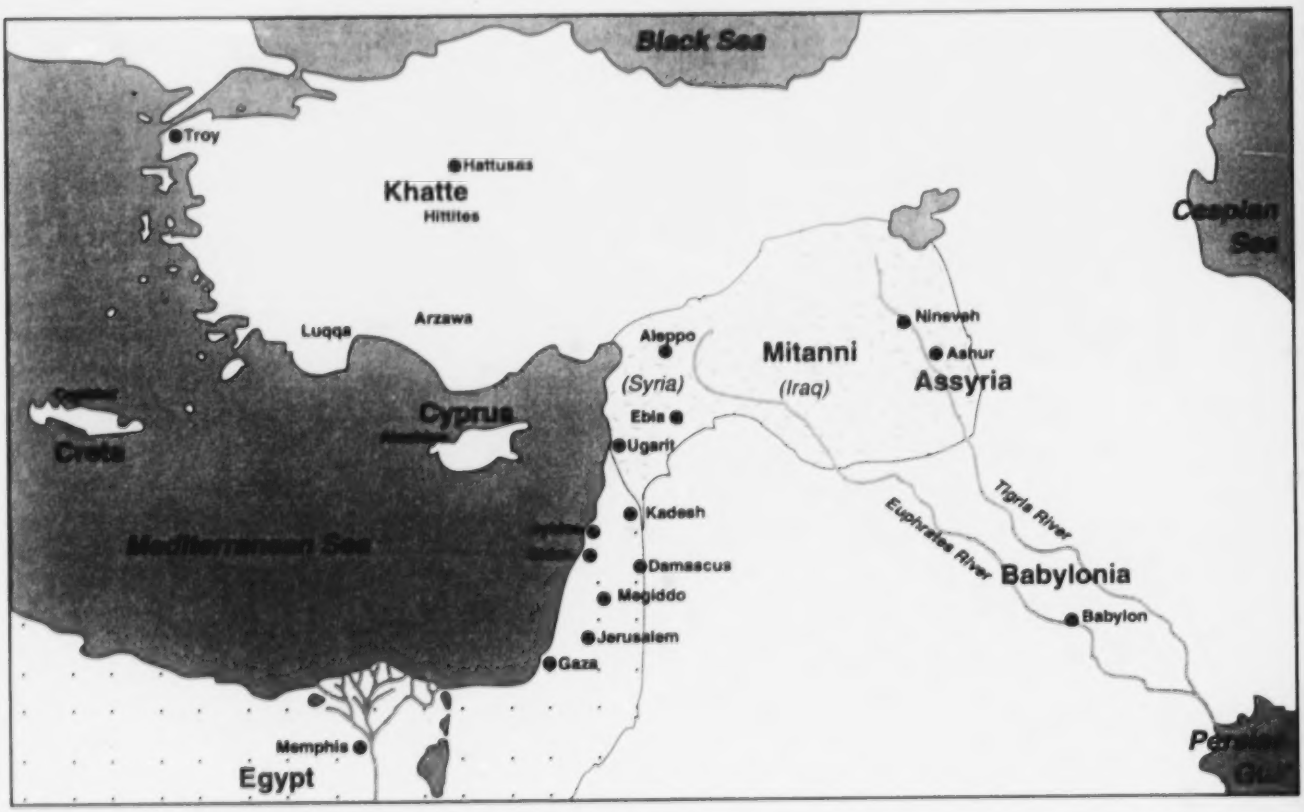
Of course, Herodotus compared the ancient Egyptians with Greek practices of his times. During this period and in the Hellenistic age, Egyptian women always had advantages in law, land ownership, inheritance, business and family relationships.

Bibliography:
Sarah Pomeroy, *Women in Hellenistic Egypt*, 1984.
Gay Robins, *Women in Ancient Egypt*, 1993.
E. Teeter, "Wearer of the Royal Uraeus: Hatshepsut," *KMT*, Spring 1990.

MAPS OF THE AREA



The route of the ancient Silk Trade Road



Egypt and the east in the 18th dynasty (circa 1375 B.C.E.)

ANCIENT EGYPT, HURRIANS, MITANNI AND HITTITES

I. **Hurrians**
   A. Origins in Armenia (?), but migrate to upper Tigris River (near Mosul, Iraq, or ancient Nineveh) circa 1900 B.C.E.
   B. Language is neither Indo-European nor Semitic.
   C. Known only from Genesis 34:20-30, and one cuneiform letter at Amarna before World War II. Many found since.
   D. A Hurrian wrote a horse training manual for Hittites.
   E. Circa 1470 defeated by Tutmose III.

II. **Mitanni**
   A. Indo-Europeans. Washukkani, capital, never found.
   B. Circa 1580 B.C.E., Hyksos driven out of Egypt, and perhaps a domino effect. Turmoil in the east.
   C. Circa 1480, Tutmose III invaded Syria. It took 17 years. Fought against Mitanni King Paratarna (Roux, 229).
   D. Circa 1410, Tutmose IV married daughter of Artatama, Mitanni King "after asking seven times" (Roux, 230).
   E. Circa 1390, Amenhotep III married Kilu Hepa (Giluhepa), daughter of Mitanni king Shutarna. She arrived with 317 women in her entourage (Steindorff, 109).
   F. The old enemies became friends because of the threat of the Hittites.
   G. Circa 1385, new Mitanni king, Tushratta, sends another daughter, Tadu-Hepa, to Amenhotep III. Amenhotep refuses to send a daughter in return. When he gets sick a statue of the goddess Ishtar is sent to him (Roux, 231).
   H. In 1350s, Mitanni civil war, pacifism of Akhenaton, and stronger Hittite King Suppiluliumas divides up the Mitanni. Hittites take Aleppo and Kadesh. No help from Egypt (Roux, 231-232).
   I. Akhenaton married his father's Mitanni wife, Tadu-Hepa (Roux, 232).

III. **Hittites**
   A. Or Khatti or "HT" (hieroglyphs) circa 1900-1200 B.C.E.
   B. Capital Hattusas, Hatti or Boghaz-Koi.
   C. Language Indo European.
   D. Letters found in archives at Amarna and at Hattusas.
   E. Hittite archives had letters in more than eight languages.
   F. Records from time of Tutmose III.
   G. Weakness of Egypt in Syria tested by Suppiluliumas.
   H. Battle of Kadesh—circa 1298 recorded at Abu Simbel, temple of Ramses II (Nubia).
   I. Ramses II fought against Muwatallis. First battle in history with several accounts. About 20,000 men on each side. Involves two Hittite "spies." Peace treaty proposed in 1284 by new king Hattusilis. Ramses marries his daughter.
   J. A demilitarized zone created by the world's first recorded treaty.
   K. Slowly learned about Hittite history:
      1. 1834—July. Charles Texier (Fr.) "discovered" Hittite sites
      2. 1871—German encyclopedia had seven lines—mostly wrong.

3. 1876—Archibald Henry Sayce, *The Empire of the Hittites.*
4. 1887—Tel-el-Amarna archives: 160 tablets to German museum.
5. 1891—Petrie discovers more cuneiform tablets and established a time-link between Amenhotep III who married the daughter of Tushratta (the Mitanni king).
6. 1904—Hugo Winckler (Ger.) 10,000 more fragments.
7. 1915—Frederick Hrozny (Czech.) deciphered and translated. Uses this inscription: "Nu ninda—an ezzatteni, vadar-ma ekutteni." Ninda = bread (Sumerian); Ezzan = eat (Old High Ger.); vadar = water. "Now you will eat bread, further you will drink water."
8. 1931—350 more tablets; 1952—830; 1953—5500 more tablets.

L. What do we know?
1. Iron workers from 1600 B.C.E. (sent King Tut a dagger; found on mummy).
2. Government not absolute monarchy, but confederation with a council.
3. Law code very humane, not *lex talionis* (Hammurabi, "eye for an eye," the law of retaliation).
4. Slaves had rights, society very fluid.
5. No single religion; toleration.
6. Yazilikaya, sanctuary.
7. Many scripts.
8. Art no distinct style.
9. No literature found.
10. Invented light chariot.
11. Horse training manual found in archives.
12. Kurt Bittel says destruction by Peoples of the Sea was complete (circa 1200), sudden and burned for weeks. Why?

Bibliography:
O. Gurney, *The Hittites*, 1962.
D. Redford, *Egypt, Canaan, and Israel in Ancient Times*, 1992.
G. Roux, *Ancient Iraq*, 1986.
G. Steindorff and Seele, *When Egypt Ruled the East*, 1942.

Abu Simbel temple in Nubia of Ramses II where he recorded the battle of Kadesh (Qadesh) in stone.

EGYPT AND THE MEDITERRANEAN WORLD

Gaballa Aly Gaballa

Gaballa Aly Gaballa, of Egypt, is professor of Egyptology at Cairo University. He was formerly visiting professor at the University of Central Florida (USA) and at the University of Kuwait.

Historic Egypt emerged as a unified country, with its own system of writing, towards the end of the fourth millennium B.C. It rapidly became the seat of a brilliant civilization in which flourished philosophy and literature, architecture and art, science and medicine, administration and social organization. From ancient times, thanks to the country's situation on the Mediterranean coast, the Egyptians made increasingly numerous contacts with Europe. The contribution made by Egypt to Western culture enriched civilization as a whole.

Around the same time, the Minoan civilization (named after Minos, the legendary king) came into being on the shores of the Aegean, centered on the island of Crete.

Although the Mediterranean was no obstacle between Egypt and the Aegean, contacts between Egyptian and Aegean traders and emissaries were made first of all in the Phoenician coastal ports, Byblos in particular. Egyptian trading vessels no doubt set sail from these ports to Crete, and called at Cyprus, Rhodes, Karpathos and Kasos before returning directly to Egypt (some 270 nautical miles from Crete), carried along by the north winds that blow in summer. The voyage then took three days and two nights.

There is no lack of archaeological evidence for relations between the two peoples. Many Egyptians cylindrical stone jars have been found in Crete and eventually the Cretans adopted the Egyptian technique of manufacturing these jars. On the island of Kithira, an alabaster vase has been found bearing the name of an Egyptian king of the fifth dynasty (c. 2465-2323 B.C.). From the 22nd century B.C., Egyptian writings began to mention Kafiou, an Egyptian adaptation of the Semitic name for Crete, Caphtor, which also appears in the Bible.

At the beginning of the second millennium B.C., there was a thriving trade between Middle Kingdom Egyptians and Cretans of the period known as Middle Minoan. Many Egyptian objects from that era, including everyday utensils, scarabs used as seals and a diorite statuette, have been found in Crete, while Minoan pottery in the Kamares style, and silver vases showing an Aegean influence, have been discovered in a temple near Luxor.

Around 1500 B.C. Egypt cast off the yoke of the Hyksos[1] and emerged from its traditional isolationism to become an international power, strengthened by a series of military victories. Phoenicia and Syria fell under its sway, and the Egyptian fleet controlled the Phoenician ports, probably extending its influence as far as Cyprus. This Egyptian presence created a new situation in the eastern Mediterranean basin. The Aegeans of the Late Minoan period and the Mycenaeans of Hellas[2] had thereafter to deal directly with the Egyptians if their merchant ships were to have access to the traditional markets of Palestine and Syria. In all probability, the Cretans and the Mycenaeans came to an agreement with the powerful Pharaoh Tuthmosis III (c. 1479-1425 B.C.). The tomb of his vizier Rekhmire, at the necropolis of Thebes, depicts Cretan emissaries bearing tribute from their island. The Egyptian inscription describes the scene: The arrival of the princes from Kaftiou and the islands in the midst of the sea, submissive and with bowed heads before the might of His Majesty Tuthmosis III." There is every reason to believe that these "islands in the midst of

the sea" were those of the eastern Mediterranean and the city of Mycenae in the Peloponnese.

Brown-skinned Aegeans, wearing brightly coloured loincloths and with thick manes of hair hanging to their shoulders or worn in one or more plaits bound around their foreheads, became a familiar sight to the Egyptians as they threaded through the streets of Thebes to bear their gifts, called "tribute" by the Egyptians, to Pharaoh: large, ornate goblets with handles shaped like animals, or elongated vases with small handles, decorated with floral motifs or horizontal polychrome lines.

Towards the middle of the 15th century B.C., the Cretan civilization foundered, probably as a result of internal power struggles. Small wonder, then, that the name of Kaftiou should have disappeared from Egyptian sources after the end of that century. However the expression "islands in the midst of the sea" continues to occur frequently in these writings, before disappearing, in its turn, in the twelfth century B.C., when successive waves of the barbarians known to the Egyptians as the "sea peoples" were surging into the Peloponnese peninsula and wreaking havoc. These hordes crossed Anatolia (where they annihilated the Hittites) and Greece, and advanced on Egypt overland across Syria and by sea via the Mediterranean islands. But they were repelled by such powerful pharaohs as Ramesses II, Merneptah and Ramesses III, who saved Egypt from destruction on a massive scale.

The Greek presence in Egypt made itself felt in the early seventh century B.C. through mercenaries serving in the Egyptian armies and merchants who set up trading posts in various towns of the Delta. Greek philosophers, historians and geographers followed them, dazzled by Egyptian civilization with its gigantic monuments, its beliefs and its wealth of knowledge.

The Greek astronomer, philosopher and mathematician, Thales of Miletus, is said to have brought back the 365-day solar calendar from Egypt at the end of the seventh century B.C. The Athenian statesman Solon (c. 640-560 B.C.) visited Egypt at the time when, according to Herodotus, the 16th-dynasty king Amasis II promulgated a law under which each Egyptian was obliged to make an annual declaration of income and return it to the governor of the province. Any person guilty of illicit gains was condemned to death. Solon had an identical law adopted in Athens. Another Greek historian, Diodorus of Sicily, recounts that Lycurgus (legendary king of Sparta) drew inspiration from Egyptian legislation, as did Plato.

Egypt's influence on early Greek art is evident, too. The kouros figure of a young man, characteristic of archaic statuary, has an Egyptian air about it. The tall, slim youth stands with his left leg forward, his arms held straight by his sides and his hands clenched. This type of statue not only imitates the attitudes of Egyptian figures, but also abides by the traditional rules governing Egyptian art, in particular the "rule of proportion" that its creators had been applying for more than 2,000 years. The human body was originally divided into 18 equal squares, and into 21 from the Saite[3] period (seventh century B.C.), when the unit of measurement of length, the cubit, was modified. Diodorus of Sicily relates that in the sixth century B.C. Telekles and Theodorus, two famous Greek sculptors, drew on that tradition for a statue of Apollo by dividing the body into 21-1/4 squares.

Over the centuries, the Greeks became increasingly involved in the history of Egypt. In 332 B.C., the country was conquered by Alexander the Great, and a Macedonian dynasty was founded which governed the country for some three centuries. Egypt became part of the Hellenistic world encompassing the eastern basin of the Mediterranean. Alexandria, the new Egyptian capital founded by the Greeks, brought fresh prestige to Hellenism

through its writers, geographers, historians, architects and astronomers.

When the Roman general Marcus Antonius, ally of Cleopatra VII, lost the battle of Actium in 31 B.C., Egypt became a Roman province. As the granary of Rome it helped to supply the Roman army during its major conquests.

As regards religion, the cult of Isis and Osiris (Serapis, in its Ptolemaic form), and of their son Horus-Harpocrates, was widely adopted in the Graeco-Roman world. The legend of Osiris, based on belief in the afterlife of the soul in a better world, has strong popular appeal, since it promises salvation to all, a concept lacking in the official worship of the Greek and Roman divinities. To the Greeks, Isis was the incarnation of destiny, since she succeeded in freeing herself from the control of the gods and thereby acquired absolute power. The Isis cult in Rome competed with the Roman religion and emperor-worship. Moreover, the Osirian triad foreshadowed the Christian trinity. Before the advent of Christianity, Isis-worship in Europe became as prevalent as the later cult of the Virgin Mary.

The world also owes the invention of the calendar and the alphabet to the ancient Egyptians.

Like other peoples, the Egyptians first devised a dating system which divided time into lunar years of 354 days. But before long they realized that it was not sufficiency accurate and was unsuited to the organization of their complex bureaucratic system, so it fell into disuse except for the celebration of certain religious events. Around 3000 B.C. they invented a solar calendar of 365 days divided into twelve months of thirty days each, to which at the end of the year were added five extra, or "epagomenal," days. The Egyptians knew that their year was six hours shorter than the solar year (365-1/4 days), but for a long time they did nothing to remedy this discrepancy. Only under Greek rule did they begin to add one day to the official year every four years, to bring it into alignment with the solar year. That calendar was adopted by Julius Caesar and imposed in Rome from 45 B.C. The Julian calendar was used in Europe and the West until, at the end of the 16th century, it was refined by Pope Gregory XIII and, as the Gregorian calendar, became known throughout the world.

Towards the end of the fourth millennium B.C., the Egyptians invented a system of writing which used hieroglyphic signs, i.e., pictures, rather than letters. These pictures were chosen, not for their meaning, but for the sounds that they represented.

It is true that the modern European alphabet is derived from the Graeco-Roman alphabet, which is directly based on the Phoenician alphabet. But what system of writing influenced the Phoenicians? The oldest Semitic texts known to us date back to the 15th century B.C. They were discovered in the Sinai desert, and contain Semitic terms transcribed with signs that resemble hieroglyphs. It is very likely that this Semitic writing was based on hieroglyphs, using a system of pictured sounds, and that it developed over several centuries into the Phoenician alphabet, in which each sound is represented by a single letter. It seems probable, therefore, that the alphabet, one of the greatest achievements of the human mind, is of Egyptian origin.

Notes:

1. Asiatic invaders of northern Egypt who ruled as the 15th dynasty (c. 1640-1532 B.C.).
2. Greeks of the classical period called their country Hellas and themselves Hellenes.
3. Named after the Twenty-Sixth Dynasty (644-525 B.C.) capital city, Sais, in the Nile Delta. Editor.

Reprinted with permission from *The Unesco Courier*, September 1988, pages 30-32

AKHENATEN

Amenophis IV

- **Born:** Probably in Memphis. First known as Amenhotep IV. Not shown with royal family in early years. Amenhotep = Amenophis.
- **Parents:** Amenhotep III and Queen Tiye.
- **Wife:** Nefertiti. Six daughters in first nine years of his rule. Most famous Ankhes-en-pa-aten or Ankhes-en-amon who married Tutankhamon.
- **Reign:** c. 1382-1366 B.C.E. Possible co-regency two years with father. During last two years of rule with Smenkhkare and six months with Tutankhamon. Heb Sed in Year 3 and Year 9 of reign. Amenhotep III had Heb Sed in Years 30, 34 and 37 of his reign.
- **Capitals:** Thebes, then Akhetaten (Tel-el-Amarna), Horizon of the Sun.
- **Amarna:** Planned during Year 3 of rule; moved in Year 5. City 9 km. long; three districts; villas scattered. Queen Tiye arrived Year 6 and left Year 10. Nefertiti left with her and no mention after Year 12.
- **Language:** More informal.
- **Religion:** Pharaoh also high priest; God Aten's name in cartouche. Symbolism of sun disc with hands. Ma'at revered. Year 9—other god's images destroyed. No animal masked priests. We do not know his other world beliefs. Monotheist or henotheist?
- **Ritual:** Daily offering tables set out in sun, not inside. Nefertiti had prayers said to her.
- **Architecture:** Open courtyard temples (760m x 290m).
- **Art periods:**
  1. ***Theban***—2-6 years of reign. Most extreme, large hips, ears, lips, nose, eyes lidded. Called "brutal" by Cyril Aldred.
  2. ***Amarna***—6-9 Years. Family oriented; gift-giving "window of appearances."
  3. ***Mellow***—9-16 Years. Head of Nefertiti found in 1912 in workshop of sculptor Tutmose—"relaxed" style.
- **Art problem:** New style? Or did he have Froehlich's Syndrome? Or hermaphrodite?

Sources:

- Archaeology in Amarna and reconstruction of Nefertiti Temple from 35,000 + talatat found in pylon at Karnak by Ray Winfield Smith and Donald Redford, *The Akhenaten Temple Project*, 1977 etc.; D. Redford, *Akhenaten, The Heretic King*, 1984; Cyril Aldred, *Akhenaten, Pharaoh of Egypt*, 1968; *Akhenaten, King of Egypt*, 1988.
- Archives at Amarna, 1886, cuneiform letters from Hittites and Babylon. They compare with Hattusas (Hittite) archives of 1906 and Khorsabad in northern Iraq found 1932-1933.
- Tombs found near Amarna in cliffs of *east* bank of Nile mostly nobles, etc. No mummies of Akhenaten or Nefertiti known.

NEW VIEW OF NEFERTITI

Nefertiti was much more than another pretty face, believed Ray Winfield Smith who had more than 35,000 talatat (blocks) carefully photographed. He then had a computer reconstruct the temple on paper. As the project has progressed, it is now known that "no other queen was ever shown so frequently on the monuments, in temples, tombs, and statuary" (Robins, 1993:53). The broken pieces of stone were from the ruins of a temple to her and Akhenaten. These blocks were rescued when the pylon or gate of the temple of Karnak's foundation was disassembled so that it could be rebuilt for safety reasons. They had been used as a rubble fill inside the thick pylons. The subsequent analysis by Smith caused him to believe that Nefertiti was the brains in the family. He fell in love with her image.

The famous head of Nefertiti wears an unusual crown. Egyptian Museum Berlin.

She was revered as a goddess, and ceremonies show her making offerings to Aten. Other carvings show prayers addressed to her which no other queen of Egypt had while her husband was alive. Her images rather than her husband's dominated the carvings. "An entire courtyard was devoted exclusively to her," said Smith. The extent of her role was unknown until the work began on the project in 1965.

Further evidence has been assembled from the new capital established by Akhenaton at Amarna (Akhetaten), about 240 miles north of Thebes. There a boundary stela has been found which gives her prominence.

Smith greatly disliked the physical attributes of Akhenaten, describing him a "physical monstrosity." Some Egyptologists believe that Akhenaten had a glandular disease such as Froehlich's Syndrome. This is a malfunctioning of the pituitary gland, and it can be present from birth or from a trauma. His statues show him with all the symptoms: a long narrow face, a sharp chin, wide fleshy lips and hips, a slight breast development and a paunch. This hormonal deficiency can be remedied today, but it usually meant that a man was impotent, sterile and "easily influenced." One nude statue in the Cairo museum shows him without genitals. He reigned about 15 years and was about 35 when he died, but we do not have his mummy to test. Nefertiti had six daughters, which Smith ascribed to a lover rather than Akhenaten. He believed that she was the power behind the throne. Redford sees Akhenaten as weak, incompetent, a sloth and inept at foreign policy. The changes did not survive them.

Bibliography:
Cyril Aldred, *Akhenaten, King of Egypt*, 1988.
D. Janson, "Carvings Give Nefertiti Big Role," *New York Times*, 9 Jan. 1972.
D. Redford, *Akhenaten, The Heretic King*, 1984.
G. Robins, *Women in Ancient Egypt*, 1993.
R.W. Smith, "Computer Helps Scholars," *National Geographic*, Nov. 1970.

WAS SMENKHKARE NEFERTITI?

Julia Samson firmly asserts that the pharaoh Smenkhkare was actually Nefertiti (*Göttinger Miszellen*, 1979). Traditional Egyptologists state that the 14-year-old Smenkhkare became a co-ruler with Akhenaten for about two or three years, and then Smenkhkare either ruled alone for a short period or with the 10-year-old Tutankhaten for a few months. Since neither his parents nor his family line is known, he is thought to have married one or two of the daughters of Nefertiti in order to give him legitimacy to rule. It is claimed that he first married Meryaten and, second, Ankhes-en-pa-aten. After Smenkhkare died, Ankhes-en-pa-aten married Tutankhaten. When there was a return to Thebes and the worship of the god Amon, they changed their names to Ankhesenamon and Tutankhamon (Aldred, 1988:202).

All of the above is conjecture. Since the evidence for even the existence of Smenkhkare is debated, Samson says that scholars are wrong in using the name Smenkhkare when the name "Nefernefruaten" is actually used. She says that Nefertiti's "long" name was "Nefernefruaten-Nefertiti," and that it appears repeatedly. Nefer means "beautiful."

Akhenaten had a co-ruler whose "first name" or prenomen of Ankhkheprure was used regularly, and sometimes it was spelled as a feminine name (Samson, 1979:53). Nefertiti's other titles were "Beloved of the Aten" and "Beloved of Akhenaten." When "Beloved of the Aten" appears, then Smenkhkare is also used. It means "he whom the spirit of Re has ennobled." Perhaps this was a female title in this period.

Samson is certain that the name Smenkhkare does not appear on any significant king list such as the Petrie co-regency stela, nor is it on any blocks found at Hermopolis, nor is it on the Berlin stela, etc. (Samson, 1979:53). She says that misattributions continue because writers do not go back to the originals "to check it out," but they continue to quote mistakes. Additionally, she points out that the phrase "Son of Re" appeared on blocks with Nefertiti, and that the title had already been used by Hatshepsut earlier in this dynasty when she ruled as king. Another woman, Tausret, who ruled as a king at the end of the 19th dynasty also took that title. So it was not unusual for a woman to use a male title (1979:54).

At first Nefertiti wore the crowns common for queens—the double feathers, the horns and disk and the cobra crown—but later she wore the unusual tall blue crown seen on her famous Berlin head. In a carving she is shown in a stance with her arm over her head trying to kill her enemies which is a usual position for male pharaohs (Robins, 1993:54).

Samson insists that a "precise definition" is required in order to identify "two kingly persons of a similar name and not clearly distinguishable in any respect" (1979:55). She wonders how Meryaten could have married him, and how he continued to rule after the death of Akhenaten, if there is no proof of his existence.

She concludes with this argument:

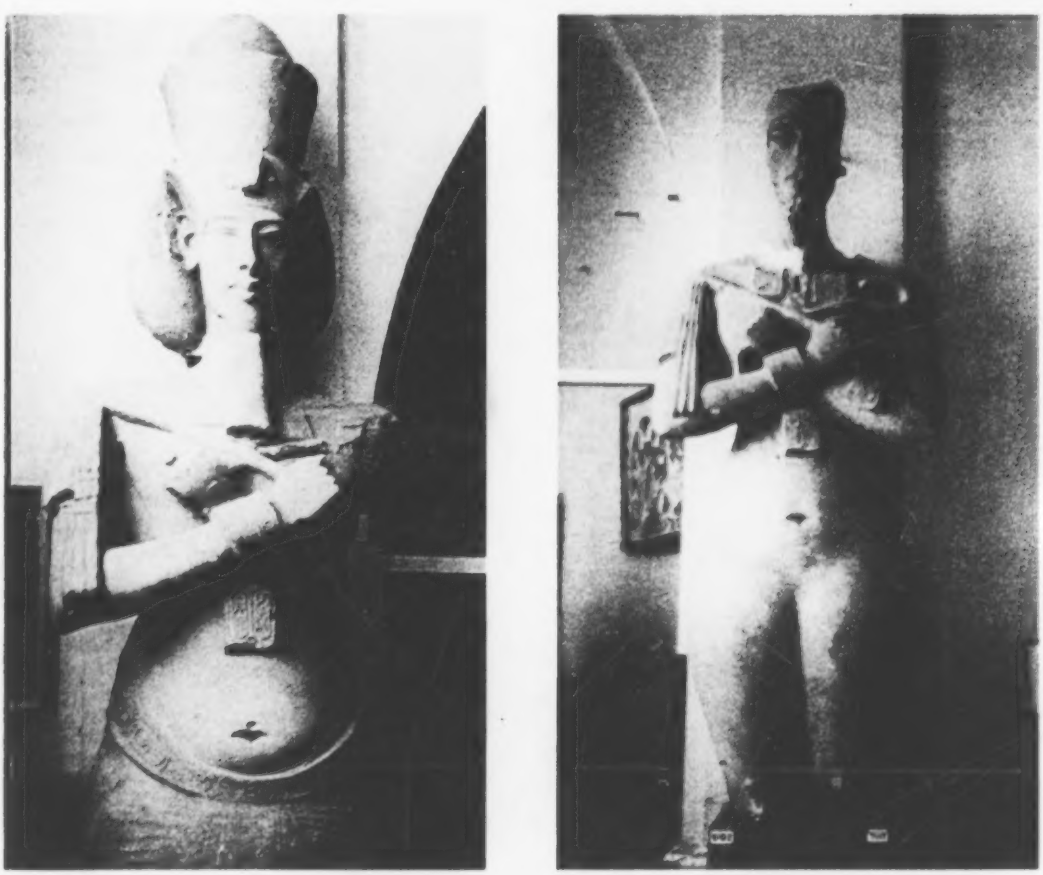
> Besides Akhenaten, the regal figure shown in the earliest scenes in Thebes and throughout Amarna history is Nefertiti. She is carved in exclusively kingly iconography both at Thebes and on a Hermopolis block. In prayers and petitions at Amarna the god, the king and Nefertiti are prayed to equally for equal benefits. On Akhenaten's sarcophagus Nefertiti is the only regal figure at his death, where, had there been another co-regent, Nefertiti's names and portraits would surely have been replaced during the coregency.

Whatever view is held by writers about the last years at Amarna, it is important to quote the form of the successor's name which is given in the inscription (1979:56).

Another advocate of this theory is J. Harris who says he has found "no valid evidence that a youth Smenkhkare existed" (Harris, 1973:16).

Considering this evidence together with the new archaeological materials of Ray Winfield Smith and Donald Redford, it makes sense that an intelligent and strong Nefertiti would have helped to smooth the transition from the disturbing years of the Akhenaten rule to that of the Tutankhamon who was to return the capital to Thebes and the worship back to Amon. Perhaps both Tiye and Nefertiti returned with him. The 18th dynasty's able women who had come just before her would have been a powerful precedent.

Bibliography:
C. Aldred, *Akhenaten, King of Egypt*, 1988.
J. Harris, "Nefernefruaten," *Göttinger Miszellen*, #4, 1973.
G. Robins, *Women in Ancient Egypt*, 1993.
J. Samson, "Akhenaten's Successor," *Göttinger Miszellen*, #32, 1979.



Akhenaten's statues in the Cairo Museum. It was unusual for statues to be nude.

KING TUTANKHAMON AND DNA

The mummy called the "elder lady" had her left arm across her chest as if holding a scepter, and it had been often identified as Queen Hatshepsut, the 18th-dynasty queen who called herself pharaoh. But in 1977 Dr. James E. Harris, an orthodontist, anthropologist and geneticist at the University of Michigan who was interested in studying problems of the teeth and jaw in a family line over several generations, x-rayed royal mummies of mainly the 18th and 19th dynasties. After an electron probe analysis of her hair, he announced that the mummy was actually Queen Tiye, the wife of Amenhotep III. The hair from the "elder lady" exactly matched a lock of braided hair found in a coffin-shaped box inside a miniature anthropoid coffin wrapped in linen and smeared with unguents with the name of Queen Tiye on it in Tutankhamon's tomb.

Further studies found an extremely close relationship of the DNA of the hair of King Tutankhamon and Queen Tiye's, leading Egyptologists to identify Queen Tiye as either Tutankhamon's grandmother or, perhaps, mother. His sister or aunt are also genetic possibilities, but age difference precludes her being his daughter.

Since we do not know, from any source, the names of Tutankhamon's mother or father, then here is a possibility. Usually Akhenaten and a Queen Kiya are proposed as his parents but that is only a conjecture. Cyril Aldred in *Akhenaten. King of Egypt* (1988:286) says the word "Ky" means "monkey" in Egyptian, and, therefore, is probably a nickname since she does not have her name in a cartouche, nor is she called "heiress" or "chief wife."

Tutankhamon's solid gold death mask is inlaid with lapis lazuli. It fully covered the head as a helmet. (Cairo Museum)

Another complication for Akhenaton and Kiya being the parents of Tutankhamon is the suspected impotence of Akhenaton. From visual inspection of artistic representations of Akhenaton, it is proposed that he suffered from a pituitary disease such as Froehlich's Syndrome or Cushing's Syndrome and could not have fathered Tutankhamon nor Nefertiti's six daughters. We have neither Akhenaton's nor Nefertiti's mummies to test.

In conclusion, an excellent argument can be made for Amenhotep III and Queen Tiye as the parents of Tutankhamon although they would be fairly old at the time.

Sources:
Cyril Aldred, *Akhenaton. King of Egypt*, 1988.
Cyril Aldred, *Akhenaton and Nefertiti*, 1973.
Donald Redford, *Akhenaton. The Heretic King*, 1984.
Nicholas Reeves, *The Complete Tutankhamun*, 1990.
University of Michigan Today, Summer 1977.

TUTANKHAMON CURSE CHRONOLOGY

I. Howard Carter (1873-1939), Norfolk, England (died age 66)
   A. First modern person to enter the tomb.
   B. 1890 with Petrie; 1899—director of Antiquities in Egypt.
   C. 1903 excavated tomb of Tutmose IV for Davis.
   D. 1907 meets Carnarvon.

II. Theodore Davis, American, died 23 Feb. 1915.
   A. Excavated in Egypt 1902-1914.
   B. Discovered 30 tombs.
   C. 1907 discovered Pit 54, Tutankhamon's embalming materials and more.

III. Lord Carnarvon. Earl of Highclere (b. 1866-d. 5 Apr. 1923).
   A. Title 1890.
   B. 1901—car accident in Germany.
   C. To Egypt—1903.
   D. Weight 123 pounds when he left England (died age 56).

IV. Concession to dig—1914 through 1918 (WW I interrupts)
   A. Discovered Amenhotep III tomb.
   B. Summer 1922—Carnarvon wants to stop; he had spent 500,000 pounds.
   C. June 1922—Carter visits Carnarvon. Concession extended.
   D. 4 November 1922—First steps; sends telegram for Carnarvon.
   E. 5 November 1922—famous 16 steps found.
   F. 23 November 1922—Carnarvon arrives in Luxor with Lady Evelyn.
   G. 26 November 1922—30 feet of rubble removed; Carter first into tomb.
   H. 17 February 1923—remove wall to burial chamber; Carter first in.
   I. 5 April 1923—Carnarvon dies of mosquito bite; infected.
   J. To 1924—coffins removed; photographs by Harry Burton.
   K. 10 October 1925—inner gold coffin opened.
   L. 11 November 1925—Autopsy by Dr. Derry.
      1. 26 people at opening of tomb in 1922—6 died in the next 20 years.
      2. 22 saw sarcophagus opened in 1925—2 died in next 10 years.
      3. 10 were there for mummy unwrapping—none died in the next 10 years.
      4. Burton, photographer, died in 1940 (60 years old).
      5. Lady Evelyn, daughter, there at opening of tomb (1901-1980).
      6. Dr. Derry, did autopsy, died in 1969, age 87.

V. My conclusions:
   A. Lord Carnarvon went to Egypt for his health in 1903.
   B. He probably prolonged his life there.
   C. The curse was created by Carter to discourage tourists!

Bibliography:
T. Hoving, *Tutankhamun, the Untold Story*, 1978.
N. Reeves, *The Complete Tutankhamun*, 1990.

SILK IN ANCIENT EGYPT

The style of women's clothing which had remained the same for centuries changed abruptly from a straight, tight, clinging linen garment to a flowing, open-pleated, white transparent dress in the mid-18th dynasty around the reign of Tutmose IV. Why? Perhaps the answer was found in an ancient Egyptian woman's curls. Strands of silk threads were identified in the hair of a mummy dated to about 1070 B.C.E. She was between 30 and 50 years old when she died. Her mummy was discovered in the workman's village of Deir el Medina near Thebes and the Valley of the Kings.

Scientists at the University of Vienna used scanning electron microscopes, infrared studies using multiple reflection which allowed non-destructive identification of the material, and amino acid racemization on the hair and silk to see if the silk was added later. They found the typical spectrum of hydrolyzed silk with hi-glycine, serine and alanine peaks. All of their tests showed an approximate date of 1070 B.C.E., and this dating was consistent with the 21st dynasty's methods of mummification, location and other environmental conditions. Chemical tests proved that the silk was from China. Silk production did not begin in the Mediterranean area until the reign of Justinian and Theodora during the 6th century C.E. Mediterranean silk contains a gummy substance called "sericin." That substance is missing in Chinese silk. The ancient Greeks called the Chinese "Seres," and the Latin word for silk was "Serica," thus, the term. Sericulture is the term for silk production.

The results, published in *Nature*, March 4, 1993, were astonishing because it was generally believed that trade along the Ancient Silk Road between China and Rome began during the 2nd century B.C.E. Now, the date for long-distance trade between China and the west must be recalculated by more than 1,000 years. We must reexamine our ideas about ancient trade routes and patterns. A larger view about the relationship of ancient trade economics and middlemen should be reconsidered (*Nature*, 1993:25).

Supposedly, the silk process was discovered more than 4,000 years ago by the Chinese Empress Hsi Ling Shi, as she was sitting in her garden under a mulberry tree when a cocoon fell into her hot cup of tea. When she tried to remove it, out came a long thin thread of silk. Whatever the reality, there was a thriving national market in China and with her neighbors by 1500 B.C.E. The process was kept a secret, and the trade was a government monopoly.

A few more stray pieces of information might help to better understand this connection

between Egypt and China. The blue stone, lapis lazuli, from Afghanistan has been found in Egyptian sites from as early as the predynastic period (c. 3000 B.C.E.), and the traditional silk route went through Afghanistan. The trade from China to the west was indirect with the Chinese trading silk to the tribes of central Asia for horses, and then the silk and lapis lazuli traded even farther to the west in Syria for luxury goods such as glass and gold. In Roman times (200 B.C.E.), the oasis of Palmyra in Syria was the gathering place for the caravans going both east and west. Could this have been an entrepot 1000 years earlier?

Gay Robins in *Women in Ancient Egypt* states that the changes in women's clothing began in the times of Tutmose IV (1993:183). Significantly, his grandfather, Tutmose III, had fought against the Mitanni in Syria for 17 years (c. 1480 B.C.E.), and Tutmose IV expanded the Egyptian empire to the north and east into the area of modern Syria. Marriage in this era was a method of sealing alliances, and Tutmose IV married the daughter of Artatama, king of the Mitanni. His son, Amenhotep III, married Kilu Hepa, the daughter of the Mitanni King Shutarna. She arrived in Egypt with 317 women in her entourage (Steindorff, 1942:109). The "entire friendship ... was built upon a purely materialistic foundation. Not for nothing were the Mitannian princesses sent to Egypt, not for nothing were they outfitted with sumptuous trousseaux and provided with rich dowries ... Gifts of not inferior value were expected in return, but what was desired above all else was gold" (Steindorff, 1942:110). Steindorff commented that not only land caravans but also ships traded along the Mediterranean coast between Syria and Egypt "to transport the manifold wares" (108). Donald Redford confirms this saying: "Substantial amounts of luxury goods passed between the two empires in the satisfaction of bride-prices and dowries and personal presents between the two monarchs" (1992:169).

The Egyptian relationships with Syria (Mitanni) lasted for more than 100 years, and it coincided with a new clothing style in Egypt. I don't think you need to ponder the changes too deeply when you realize that the new luxury goods the Mitanni had to trade was silk from caravans traveling to their east. The hundreds of Mitanni women did leave an impact in Egypt.

And what did the Chinese desire from the west? Gold is always the first choice. Where did the Mitanni get that? Egypt, of course. Egypt by the 18th dynasty got gold from Nubia and Kush. The second, and usually overlooked, product was glass, another specialty of the Egyptians in the 18th dynasty (Schäfer, 1967:169; Kozloff, 1992:373-392). Just imagine the possible trade in lapis lazuli and gold, both found in abundance in the treasures of the tomb of Tutankhamon, glass and silk. If earlier Egyptologists would have been interested in textiles, we might have salvaged some examples, but silk does disintegrate in dry heat (Kolander, 1985:120-129).

Next, look at the illustrations in either Desroches-Noblecourt's *Tutankhamen* or the exhibition catalog *The Treasures of Tutankhamun*. Look through the illustrations showing clothing with this new perspective. The drape and flow of the clothing is unquestionably silk and not linen. The soft dresses of Ankhesenamon curve with her body. Her body is often wrapped with a large square of silk and tied under her breasts. Large 4 ft. by 4 ft. silk scarves are still sold in the souks of Syria.

Recently I led a study tour to Palmyra, and a man on a bicycle followed us through the ruins selling these large silk scarves. The more fashion conscious women tied them around their hips or across their bodies exactly as we see in the 18th-dynasty examples. All of a sudden I had that "Eureka!" experience when I read the article from *Nature*.

First, look at the example from the small wooden gilded shrine where Tutankhamon is pouring a liquid (perfume?) onto the hand of his wife Ankhesenamon. Notice the way the material conforms to her body and follows her curves. The material looks pleated (*Treasures*, 1976:plate #9). A modern example from Afghanistan is useful here. Even today women there wear a head-to-ankle body cover or veil which is tightly pleated silk or rayon. The pleats are of the type in designer Fortuny's dresses or in the more common cotton gauze tightly pleated summer skirts which are usually stored twisted to keep the pleats tight.

What really clinched the argument for me is the carved wood, gold-plated throne of Tutankhamon. The back panel of the throne shows Tutankhamon and Ankhesenamon facing each other wearing those same flowing clothes. Carved silver is inlaid in the gold to set off the white silk of their garments (Desroches-Noblecourt, 1965:plate IX). Similarly, the lid of the painted and inlaid chest used carved ivory to indicate this precious imported material (*Treasures*, 1976:plate #33).

The gilded sculptures of the four goddesses protecting the large shrine of Tutankhamon have always caused comment by any who have seen them since they wear long clinging dresses which follow the line of the body in an extremely sensual way. The soft material falls over the left shoulder. It is said that when pictures of these sculptures were first seen in the 1920s, they influenced women's nightgown designs. And so they should have since silk was still the material of choice for stockings and underwear in the 1920s prior to use of nylon and other synthetic materials (*Treasures*, 1976:plate #25).

Another example, but this time on a man, is the 30-inch-tall carved wood gilded sculpture of the striding Tutankhamon as a harpooner. The skirt flows rhythmically with his body as he steps forward, and again it is fluid and pleated (*Treasures*, 1976:plate #21). Examine the small solid gold figurine of Tutankhamon which is just 3-1/2 inches tall and on a staff. The pleated material can be seen best from the rear (*Treasures*, 1976:plate #12).

From the earlier period of Akhenaten and Nefertiti many examples can be found where their clothing is shown in a similar fashion (Desroches-Noblecourt, 1965:#73, #75 and in numerous other books). During the New Kingdom many tombs have wall paintings of women at banquets (Robins, 1993: #35, #80, and elsewhere). All are wearing their finest apparel for a party, and that would be silk for the noble and upper-class women who could afford the expensive material worn by the royalty. The material is white, gossamer and transparent with a gold glitter on the fabric.

All of these examples come from the proper geographic area of Thebes and the Valley of the Kings near where the woman's mummy was discovered with the silk threads in her hair, and they are all less than 300 years earlier than her date. The trade of lapis lazuli from Afghanistan is undisputed, and the friendly relationship with Syria is attested to in the correct period for the change in women's clothing fashions. An early peak of the silk production in China is less than 100 years prior to the 18th dynasty's change in fashion. Can our eyes deceive us? The coincidence of all of the above events is compelling.

Howard Carter's handling of textiles from the tomb of Tutankhamon might explain why we do not have any other remains of silk. Carter said that some materials looked as if they were "fresh from the loom," while others had the "consistency of soot" (1977:159). In a painted box, Carter found some extremely ornate clothing which was not neatly folded, but was "crushed, bundled and interfolded." "Something had to be sacrificed" (1977:168), either the cloth or the decoration, said Carter, and, with regret, he decided to sacrifice the material since he could re-create a garment in the museum later (1977:169). He did not know

"how best to handle cloth that crumbled at the touch, and yet was covered with elaborate and heavy decoration ... the whole surface of the robe is covered with a network of faience beads, and with a gold sequin filling in every alternate square in the net ... The upper level of cloth was very deceptive in appearance. It looked reasonably solid, but if one tried to lift it, it fell to pieces in one's hand" (1977:167). I wonder how many other less careful or truthful archaeologists destroyed the textiles in order to rescue the gold sequins? When Carter did get back to the museum, he probably re-created the robe on linen assuming that was what had disintegrated. More likely the material that had turned to the "consistency of soot" was silk. Authoritative books say that if silk is not properly dyed, then it will disintegrate into dust (Kolander, 1985:128), and if not dried in the shade, or if overheated, it will crack within one year (Kolander, 1985:129). Silk "rot" will occur from perspiration or alkali soap (Kolander, 1985:14, 116).

Carter specifically said that the threads of the textiles were similar to the fragments he found in the tomb of Tutmose IV (1977:172), just as you might expect if silk had been introduced during his reign.

Is it possible that the working woman who had strands of silk in her hair was a seamstress? Although she would not own a silk garment herself, is that the reason a commoner might have scraps of silk in her hair?

Several English words have their roots in specialized words for silk. Gauze meant "an open mesh fabric from Gaza" (Kolander, 1985:96), which would have been exceptionally cool in Egypt in the summer, and also transparent as we see in the art. The word muslin originally meant a silk muslin similar to chiffon, but more openly woven, and from Mosul, Iraq (Kolander, 1985:102). The Hebrew word for silk was "meshi," meaning a "silken gauze," and mesh in English (Kolander, 1985:7). This was probably the "net" that Carter saw sewn with sequins. Strangely, the Hebrew word "meshi" is related to Moshe which is Moses in English. The name Moshe means "to draw out" (from the water) which is the way silk is spun. The Biblical Moses was in Egypt around 1250 B.C.E. Is all this just a coincidence?

Since the eye seldom sees what the mind does not anticipate means that closer attention should be paid to textiles. If silk was expected and looked for, more might be found! The implications of this long-distance trade from the Nubian gold to the Chinese silk should send everyone back to rewrite the textbooks.

Bibliography:

H. Carter and A.C. Mace, *The Discovery of the Tomb of Tutankhamen*, 1977.
C. Desroches-Noblecourt, *Tutankhamen*, 1965.
C. Kolander, *A Silk Worker's Notebook*, 1985.
A. Kozloff and B. Bryan, *Egypt's Dazzling Sun, Amenhotep and His World*, 1992.
G. Lubec, et al., "Use of Silk in Ancient Egypt," *Nature*, Vol. 362, #6415, 4 March 1993, p. 25.
Metropolitan Museum of Art, *Treasures of Tutankhamun*, 1976.
D. Redford, *Egypt, Canaan and Israel in Ancient Times*, 1992.
G. Robin, *Women in Ancient Egypt*, 1993.
E. Schafer, *Ancient China*, 1967.
G. Steindorff and Seele, *When Egypt Ruled the East*, 1942.

NEW KINGDOM POETRY

A young woman says:

Going to the pond is pleasant, beloved
Where I may bathe in your presence,
So you may be pleased by my beauty
In my blouse of pure linen,
While it is wet.

What does the young man say?

When I see my dearest approaching,
My heart is happy.
My arms are opened wide
To embrace my love.

When her arms are opened wide,
I am in the land of perfume.
When her lips are opened as we kiss,
I am pleased even without beer.

My beloved carefully casts her net,
Her hair surrounds me with one toss.
She ties me to her with her eyes.
Her necklace is a noose.
I'm branded by her signet ring.

OZYMANDIAS

Another name for the long-lived pharaoh, Ramses II of the 19th dynasty, was User-Maat-Re, which became Ozymandias to the ancient Greeks.

Diodorus Siculus, a first century B.C.E traveler and historian, said he saw this inscription in Egypt on a base from which a huge statue had fallen and broken:

My name is Ozymandias,
King of Kings, if any
would know how great
I am and where I lie,
let him surpass any of
my works

The place Diodorus Siculus mentioned was probably the Temple of Ramses II or the Ramesseum in Thebes because, still today, there are the shattered remains of a colossal statue of him. It is estimated to have been 57 feet tall and to have weighed about 1000 tons. A similar statue was discovered in 1816 and taken to the British Museum.

Ramses II had a monumental ego (pun intended), and there were huge statues of him all over Egypt. A famous pair of statues more than 45 feet tall were found in the ancient capital of Memphis, and there are four 65-foot-tall statues of him carved into the facade at Abu Simbel in Nubia.

So this poem, Ozymandias, by Percy Bysshe Shelley written in 1817 reflected well the quotation by Diodorus and the actual archaeological remains.

I met a traveller from an antique land
Who said: "Two vast and trunkless legs of stone
Stand in the desert ... Near them on the sand,
Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them, and the heart that fed.
And on the pedestal these words appear:
My name is Ozymandias, King of Kings;
Look on my works ye mighty and despair.
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare,
The lone and level sands stretch far away.

CURSES AND KISSES

"A thousand gods of the land of Hatti together with a thousand gods of the land of Egypt" would curse and destroy anyone who broke this oldest known non-aggression treaty in the Middle East between independent states. It ended years of warfare between the Egyptians and Hittites. The 19th dynasty pharaoh Ramses II, in the 21st year of his reign, and the Hittite King Hattusillis each declared that the other had initiated a peace proposal. Fortunately, numerous clay cuneiform tablets still exist from Hattusas, the Hittite capital near modern Ankara in Turkey, as well as an Egyptian inscription on a stela in the temple of Karnak. Although 1,000 miles apart, the two sources have identical phrases, but they are not exact copies. They agreed to exchange etched silver tablets which no longer exist.

The treaty agreed to end military hostilities in the area of present-day Syria, Lebanon and Israel, but did not state exact boundaries. They would defend each other if attacked by others, and they would exchange prisoners, hostages and political refugees. The kiss was to be given by the eldest daughter of Hattusillis who was sent to the harem of Ramses II.

All of these curses and kisses came about because the 18th-dynasty pharaoh Tutmose III had expanded the Egyptian Empire and won the battle of Megiddo (in modern Israel) and defeated the king of Kadesh (Qadesh). During the reign of Akhenaten the area was slowly lost to the Hittites until Horemhab, Seti and Ramses made an effort to restore it to Egyptian rule. Ramses II fought against the Hittite King Muwattilis at Kadesh (in modern Syria) which is a strategic location on the Orontes River, at the north end of the Ba'aka Valley and the Homs Gap. The British Museum excavated the 90-foot-tall tell of Nebi Mend in order to learn more about the battlefield.

In Egypt there are eight surviving copies of the "poem" about the battle in the temples of Karnak, Luxor, Abydos, Ramesseum and a shorter version at Abu Simbel, all depicting Ramses II as the victor and courageous. Predictably, the cuneiform tablets found in Hattusas differ, and they tell how Ramses II had to retreat to the area around Damascus. The Egyptian poem had the Hittite king conclude: "Better is peace than war ...."

Surviving also are about 26 letters from Ramses to the Hittite King Hattusillis and 13 from Ramses II's wife, Nefertari, to the Hittite Queen Pudukhepa. Finally, the marriage of Hattusillis' eldest daughter to Ramses II was arranged, and the princess was met by an Egyptian welcoming party near Damascus and escorted with great fanfare to the new city of Pi-Ramses in the delta. The princess was declared "fair of face like a goddess."

How different from modern treaty conference conclusions!

Sources:
Donald Redford, *Egypt, Canaan, and Israel in Ancient Times*, 1992.
John Wilson, *The Culture of Ancient Egypt*, 1968.

VICTORY HYMN OF MERNEPTAH
OR ISRAEL STELA

This is an example of poetic praise carved in hieroglyphs on stone for the military victories of the 19th-dynasty pharaoh Merneptah, a son of the long-lived Ramses II. It is not a true historic text, but one of a series of commemorative hymns celebrating Merneptah's victories in Year 5 of his reign (around 1230 B.C.E.) over the Libyans. Here is the earliest and only known Egyptian hieroglyphic record of the name Israel. Hand-drawn Egyptian hieroglyphs are shown below the translation.

The prostrate princes are saying: "Peace! "
Not one of the Nine Bows raises his head.
Tjehenu is destroyed; the Hatti at peace;
Canaan is conquered; Gezer taken;
Yanoam is now nonexistent;
Israel is laid waste, with no seed;
Hurru is become a widow for Egypt.
All the lands have been pacified
By the King of Upper and Lower Egypt, ...
Son of Ra, Merneptah, Content with Maat.

Notes:

- Line 1: The Canaanite "Shalam" word was used.
- Line 3: Hatti are the Hittites. Yanoam was a town in Northern Palestine.
- Line 6: "Seed" usually means "offspring or children." It is a common ancient boast.
- Line 6: Pritchard notes that Israel is the only one on the list that has "people of" as a determinature, and not "land of" as do the others. Settled peoples have the determinative for "land," but "unlocated" groups are called "people." Pritchard warns this should not be used as any argument since there were many blunders by scribes on this stela (1955: 376-378).

Bibliography:

Miriam Lichtheim, *Ancient Egyptian Literature*, 1976.
James B. Pritchard, *Ancient Near Eastern Texts*, 1955.

THE LATER DYNASTIES

The invasions of the Sea Peoples, the failing economy, and the tomb-robbing scandals combined to contribute to the slow decline of Egypt after the 20th dynasty. Some lucky people's lives spanned a generation of peace and prosperity which every now and then fit in between periods of turmoil and trouble. The 21st through 26th dynasties are sometimes called the Third Intermediate Period. Again, the term intermediate means confusion, but even the modern terminology for this period is unsettled.

Often there were delta dynasties ruling while simultaneously another was ruling from Thebes. During the 21st dynasty, Smendes ruled from Tanis in the delta, and the priests of Amon ruled from Thebes.

The 22nd dynasty existed at the time of King Solomon in Israel. After his death the division of his kingdom between Jeroboam and Rehoboam into Israel and Judah. Shoshenk, called Shishak in the Bible, provided refuge for Jeroboam who had led a revolt against Solomon (I Kings 14:25), and then set up an independent state of Israel, while Solomon's heir, Rehoboam, ruled Judah. Around 925, Shoshenk realized the division and weakness of the two states and saw his chance to militarily reestablish Egypt's empire in the east. This success lasted briefly, as on the farther northern horizon, the Assyrian Empire was expanding towards Egypt.

When Egypt was strong, Nubia, between the first and second cataracts, was annexed, but, whenever there were difficulties in Egypt, Nubia either seceded or attacked Egypt. During the 22nd and 23rd dynasties brief invasions were made by Kush, but they did not survive. With the 25th dynasty, the Kushites were successful and unified Egypt. When they were expelled by an alliance of northern Egyptians from Sais and the Assyrians (Grimal, 1988:351), the Kushites took much of Egyptian culture back with them.

The Assyrians sacked and destroyed Memphis and Thebes, stripping the monuments of gold because those two cities had refused an alliance with them. But they were extended too far from home, and so they took their plunder with them and left the king of Sais, Necho I, to control northern Egypt. Necho had a canal dug between the Nile and the Red Sea which caused a flourishing of new trade routes and influences in Egypt. A Greek trading colony was established at Naucratis in the western delta around 600 B.C.E. as a free trade zone. Foreign merchants arrived from all over to buy papyrus and grain for export. Professional interpreters (tour guides) were in demand "who guided Greek intellectuals around the great shrines," (Grimal, 1988:355), thus smoothing the path for that traveler-historian, Herodotus, who arrived about 150 years later. The Assyrians recognized Psamtik as the sole pharaoh of Egypt. He ruled for 54 years using Greek, Phoenician, Syrian and Jewish mercenaries. A Jewish unit was stationed at Elephantine Island (Aswan).

The Assyrian Empire was conquered around 600 B.C.E. by an alliance which included the Persians. After the Persians took over the alliance and consolidated their empire, Cambyses invaded Egypt and made it a province of the Achaemenid Empire (Persia) in 525 B.C.E. The Persians had a very bad reputation as rulers of Egypt. It was rumored that Cambyses stabbed a sacred Apis bull. Their Zoroastrian religion was in conflict with the polytheism and animal worship of the Egyptians. Whenever the Greeks were at war with the Persians, at various times between 525 and 332 B.C.E, the Egyptians rose in revolt and were able to be independent of their rule for as long as 60 years. The 28th dynasty was one

of these periods. During the 30th dynasty, the pharaoh Nectanebo II hired 20,000 Greek mercenaries to fight the Persians who had also hired Greeks to fight for them!

Alexander the Great of Macedonia defeated the Persian armies and was welcomed as a savior and a divinity. This was supposedly confirmed when he visited the oracle of Amon at Siwa. He founded the city of Alexandria, and when he died in 323 B.C.E. in Babylon, he had his body prepared for burial. Ptolemy, one of his commanders, hijacked the body and brought it to Egypt. Both Strabo and Octavian claim to have seen it on display in the royal palace in a crystal coffin in Alexandria. The Macedonian-Greeks ruled Egypt for about 300 years (332-30 B.C.E.).

Isn't it curious that both Alexander and Ptolemy were students of Aristotle and his philosophy of logic? At the Museum of Alexandria, logic was applied to all the practical learning of the ancient Egyptians. A textbook was written by Euclid putting the proofs of geometry in logical order, and Manetho put the dynasties into a similarly neat order for us to study. Aristarchus proposed a helio-centric (sun-centered) theory of the universe, and Eratosthenes measured the circumference of the earth with an accuracy of 100 miles. Many other astronomers and scientists came to Alexandria for research and study.

The Ptolemies ruled from Alexandria, but, when Augustus defeated Antony and Cleopatra at Actium, Egypt was added to the Roman Empire and was ruled by absentee owners who plundered Egypt causing its complete decline.

Reading:
N. Grimal, *A History of Ancient Egypt*, 1988.

The Temple of Dendera
The temple we see today was built during the Middle Kingdom (c. 2000 B.C.E.) on the site of an earlier temple. It was restored in the New Kingdom (1500-1300 B.C.E.) and reconstructed during the Ptolemaic Period (c. 250 B.C.E.)

KUSHITES

c. 750 -650 B.C.E.

Nubia: 1-2 cataracts
Kush: 2-6 cataracts (Sudan)

"Tradition"—Herodotus c. 450 B.C.E. "18 of 33 pharaohs" were "Black." (which 33?)

Trade to Nubia, Kush, as early as the sixth dynasty led by Harkuf. In 18th dynasty, Nehsi, caravan leader for Hatshepsut traveled to Nubia, Kush and Punt.

Nubia annexed to Egypt now and then. NB = gold

In the 25th dynasty Kashta and son, Piye (Pi-ankh-y), invades and unifies Egypt, c. 750 B.C.E.

They became Egyptianized: 1. Worship—Amon, Horus, etc.; 2. Use hieroglyphs; 3. Horses—especially cared about. "The stables were larger than their palaces."

Legitimacy claimed: Pi-ankh-y's daughter, Amenirdis, "adopted" by priestess of Amon, Shepenwepet.

Other Pharaohs: Shabaka; Shebitku; Taharqa; Tanwetamani.

Then Assyrians invade from Northern Iraq (near Mosul):

671—Esarhaddon sacks Memphis
663—Ashurbanipal sacks Thebes

Kushites return to Napata. Move capital to Meroe. Meroitic alphabet.

Continued: religion, hieroglyphs, architecture: pyramid & temple. Iron workers.

c. 300 B.C.E.—Arkhamani (Ergamenes in Diodorus Siculus) learns Greek in Alexandria during the reign of Ptolemy II— "The King Must Die" story.

c. 24 B.C.E.—Queen (Kandake) Amani—Shakete raided Aswan. She took statue head of Augustus, Roman emperor, from Philae Island. Roman legion sent to return it failed. Head found in excavation in 1912 at Napata, Sudan!

Bibliography:
William Adams, *Nubia: Corridor to Africa*, 1977.
The Brooklyn Museum, *Africa in Antiquity*, 2 vols., 1978.
W. Emery, *Egypt in Nubia*, 1965.
W. Fairservis, *Ancient Kingdoms of the Nile*, 1962.
T. Kendall, "Kingdom of Kush," *National Geographic*, November 1990.
David Roberts, "Out of Africa," *Smithsonian*, June 1993.
P. L. Shinnie, *Meroe*, 1967.
F. Snowden, *Blacks in Antiquity*, 1970.
John Taylor, *Egypt and Nubia*, 1991.
B. Trigger, *Nubia Under the Pharaohs*, 1976.

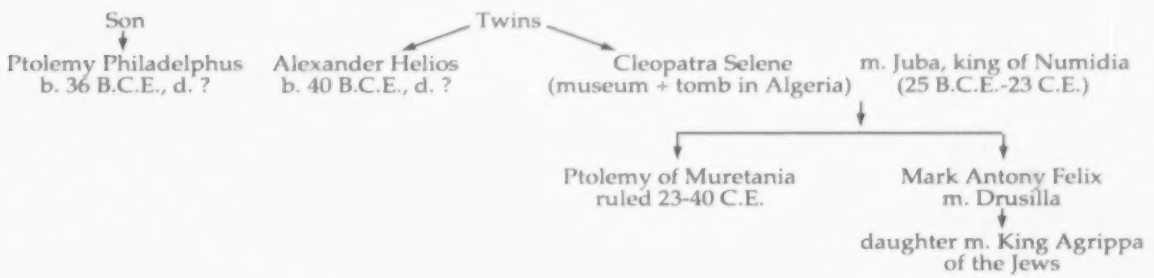
PTOLEMAIC EGYPT

c. 330-30 B.C.E.

- **Alexander the Great (son of Philip II of Macedon and Olympias of Epirus):** b. 20 July 356; in Egypt 332-330; died 323 in Babylon. Founded Alexandria. Visited Oracle of Amon at Siwa. His commanders were Ptolemy and Seleucus.
- **Ptolemy I (Soter), a Macedonian:** General. Coinage of copper, silver and gold. He built Alexandria whose population was ethnically diverse. Jewish mercenaries and captives. Restored Red Sea canal.
- **Ptolemy II:** Introduced camels. Brother-sister marriage. Syncretism in religion: Zeus = Amon. Serapis = Zeus + Apis. Names in cartouche. Museum and library were established around 300 B.C.E. Aristarchus, Eratosthenes, Euclid, etc.
- **Ptolemy V:** Issued Rosetta Stone. Champollion used it for decipherment of hieroglyphs.
- **Ptolemy XII (Auletes), the flute player:** His first marriage is to Cleopatra V. The name of his second wife is unknown. His daughter was:
  - **Cleopatra VII (of movie fame):** b. 70, d. 30 B.C.E.
  - Co-ruler with her father, 51-49. He dies 49 B.C.E.
  - Marries her brother Ptolemy XIII *then marries brother* Ptolemy XIV.

Ptolemy XIII		Ptolemy XIV.
b. 61 B.C.E.		b. 59 B.C.E.
m. 51		m. 47
r. 51-47		r. 47-44
d. 47		d. 44

  - Civil war vs. Ptolemy XIII, 49-47 B.C.E.
  - Julius Caesar, b. 100, d. 44 B.C.E. Arrived in Egypt October 48 B.C.E.
  - Cleopatra has a son, Caesarion, b. 47. d. 30 B.C.E. Also known as Ptolemy XV.
  - Marc Antony (b. 82, d. 30 B.C.E.) is with Cleopatra 44-30. She has his son and twins.
  - They lose the battle of Actium to Octavian (Augustus) in 31 B.C.E.



Bibliography:

The Brooklyn Museum, *Cleopatra's Egypt*, 1988.

M. Grant, *From Alexander to Cleopatra*, 1982.

Plutarch, *Lives*, "Caesar" and "Mark Antony."

Pomeroy, *Women in Hellenistic Egypt*, 1984.

W. W. Tarn, *Hellenistic Civilization*, 1961.

E. J. Bickerman, *Jews in the Greek Age*, 1988.

INDEX

Abu Simbel 5, 38, 63, 80
Achaemenid 82
Afro-Asiatic 7
Akh 19, 25, 29
Akhenaten 26, 38, 39, 57, 58, 61, 63, 68 ff., 76
Akhet 4
Albright, W. F. 56
Alexander the Great 66, 83, 85
Amani-Shakete 84
Amarna see Tel-el Amarna
Amenemhat 40, 47, 53
Amenhotep 26, 58, 60, 63, 68, 73
Amenirdis 84
Amon 17, 20, 21, 24, 27, 28, 29, 53, 57, 58, 59, 60, 83, 84, 85
Amratian 9, 10, 11
Amulet 14, 22, 23, 50
Ankh 23
Ankhesenamon 58, 70, 75, 76
Anubis 20, 21, 25, 30, 31, 32, 33, 49, 50, 52
Apis 20, 85
Archaic Age 2, 13, 46, 49
Aristarchus 83, 85
Arkhamani 84
Assyrians 82, 84
Aswan 3, 4, 5, 11, 38
Aten 20, 68 ff.
Atum 20, 21
Augustus 83, 85
Ba 19, 29, 36, 51
Badarian 9, 22
Bast 20, 24, 31, 32, 37, 51, 54
Beer 15
Belzoni 45
Beni Hasan 3, 38
Bernal, Martin 8
Bes 20, 22
Black Athena 8
Book of the Dead 19, 22, 51
Buhen 13
Calendar 5, 67
Cambyses 82
Canopic jars 50
Carnarvon, Lord 73
Carter, Howard 76, 77
Cartouche 16 ff.
Cataract 5, 13
Cenotaph 19
Champollion, Jean François 16 ff.
Cheops (see Khufu) 17, 40 ff.
Cleopatra 16, 54, 67, 85
Cobra 6, 20, 67
Coffin texts 36, 51
Columella 15
Crete 65, 66
Crook 6
Cuneiform 63, 68
Dashur 40, 44
Davis, Theodore 73
Deir el Bahri 38, 59, 60
Demotic 16
Dendera 30, 33, 36, 39
Diodorus Siculus l, 49, 51, 66, 79, 84
Djed 23
DNA 51, 52, 72
DSHRT 4, 7
Ebers Medical Papyrus 15
Elephantine 3
Encaustic 35, 50
Ennead 21
Eratosthenes 83, 85
Euclid 83, 85
Faience 9, 11, 14, 22, 77
Faiyum 3, 6, 47
Flail 6
Froehlich's Syndrome 68, 69, 72
Geb 20
Gerzean 9, 11
Giza 3, 40 ff.
Granite quarry 5
Green 10, 12
Hapi 20
Harkuf 5, 84
Hathor 15, 20, 24, 32, 54, 59
Hatshepsut 24, 38, 54, 56 ff., 70, 84
Hattusas 62, 63, 80
Hattusilis 63, 80
Heb Sed 23, 32, 43, 60, 68
Hek 15
Heliocentric 83
Heliopolis 3, 13, 21, 28
Henotheist 19, 26, 68
Herodotus 1, 4, 45, 49, 50, 61, 66, 82
Hierakonpolis 3, 9, 10, 11, 12
Hieroglyphs 16 ff.
Hildesheim 30, 32
Hittites 8, 61, 62, 63, 64, 80, 81
Hoffman, Michael 9 ff.,
Horemhab 31, 57, 58
Horus 10, 11, 13, 22, 23, 25, 26, 32, 50, 51, 53, 67
Huni 40, 41, 44
Hurrians 63
Hyksos 39, 55 ff., 65
Hypostyle 28
Imhotep 41, 43
Indo-Europeans 35, 63
Intermediate Period 2, 8, 13, 39, 53, 55
Inundation 4
Isis 20, 22, 23, 24, 25, 31, 50, 54, 67
Israel Stela 81
Jeroboam 82
Joseph 1, 6, 56
Julius Caesar 85
Ka 19, 29, 51
Kadesh 62, 63, 80
Karnak 24, 27, 28, 38, 59, 69
Kashta 84
Khephren (Chephren) 17, 40 ff.
Khnum 20
Khonsu 20
Khufu (Cheops) 17, 40 ff.
Kilu-Hepa 59, 75
KMT 4, 7
Kush 3, 7, 8, 47, 57, 82, 84
Lapis lazuli 9, 13, 14, 22, 75, 76
Lotus 6, 21
Lower Egypt 6, 9, 10, 12
Ma'at 20, 32, 36, 51, 59
Maidum 3, 40, 41, 44
Manetho 2, 53
Mariette 30, 34
Mastaba 41, 43, 44, 48, 49
Megiddo 80
Meket 22
Memphite theology 19, 21

Men Ka Ra (see Mycerinus) 40, 41
Menit 24
Mentuhotep 38, 53
Merimda 9
Meritaten 61, 70
Merneptah 81
Meroe 84
Mesopotamia 10
Min 20
Minoan 65
Mitanni 7, 8, 58, 59, 75
Monotheism 19, 26, 68
Mskr 35
Mummy 7, 11, 20, 49 ff., 68, 72
Muwatallis 63, 80
Mycerinus 40, 41
Naqada 9
Naos 19, 27
Napata 6, 84
Narmer Palette 10, 12, 54
Natron 14, 29, 50
Naucratis 82
Necropolis 10, 19, 20
Nefertari 54, 61, 64, 80
Nefertiti 7, 24, 54, 58, 68 ff.
Neith 20, 50, 54
Neith Aqert 13, 54, 62
Nekhbet 20
Nekhen 9, 10, 11
Nepthys 20, 50, 54
Nofret 8
Nome 11
Nubia 3, 5, 6, 7, 8, 13, 57, 59, 62, 75, 77, 82, 84
Nun 21
Nut 20, 24, 29, 54
Obelisk 5
Ogdoad 21
Old Kingdom 2, 13, 38, 39
Opening of the mouth 50, 52
Oracles 32
Osiris 20, 23, 25, 67
Ozymandias (see Ramses) 79
Papyrus of Ani 51
Papyrus 6, 16, 17, 20
Pepi II 5, 13
Philae Island 3, 5
Pi-ankh-y (also Piye) 84
Piye 84
Plutarch 1, 26
Polytheism 19, 26
Predynastic 2, 9, 10, 42
Proto-Dynastic 9, 10, 11
Psamtik 82
Ptah 20, 21, 24, 28
Ptahotep 54
Ptolemaic 2, 17, 51, 67, 83, 85
Ptolemy 16, 17, 83, 85
Pylon 28, 38, 69
Pyramid texts 13, 17, 19, 21, 46, 51
Pyramids 11, 13, 38 ff.
Queen of Punt 59
Quibell 10, 12
Ra 13, 15, 20, 21, 26, 28, 53, 55, 70
Rahotep 8
Ramesseum 79, 80
Ramses II 16, 26, 36, 57, 61, 63, 79, 80
Red Crown 6, 10, 12, 13
Rehoboam 82
Rosetta Stone 16 ff.
Samson, Julia 61, 70 ff.
Saqqara 3, 11, 13, 40 ff.
Scarab 21, 23
Scorpion 10
Sea Peoples 57, 66, 82
Sekhmet 15, 20, 22, 37, 54
Selket 20, 50, 76
Senefru 13, 40 ff.
Senenmut 59, 60
Senusret 28, 47, 53
Serapis 85
Serdab 43
Serekh 12
Seres 74
Serica 74
Seth 20, 23, 25, 26, 55
Shawabti or ushabti 19
Shelley, Percy B. 79
Shoshenk 82
Silk 74 ff.
Silk Road 74 ff.
Sinuhe 53
Sirius 5
Sistrum 24, 54
Siwa 83
Smendes 82
Smenkhkare 61, 68, 70, 71
Smith, Ray Winfield 69, 71
Snowden, Frank 8
Sobek 20, 51
Sobeknefrura 53, 54, 59
Solar boat 46, 47
Sothis 5
Sphinx 46, 48
Stela 69, 70, 81
Strabo 1, 83
Syncretism 19, 20, 85
Talatat 69, 70
Tausret 54, 70
Tawy 10
Tel-el Amarna 58, 61, 63, 64, 68, 69
Terra cotta 30
Theocracy 19
Thet 23
Thoth 17, 20, 28
Tiye 54, 58, 68, 72
Tuart 20, 22, 54
Turin King List 55
Tutankhamon 1, 11, 14, 17, 37, 46, 50, 51, 57, 58, 64, 70 ff., 75, 76
Tutmose 47, 58, 60, 63, 74, 75, 77
Tuya 7, 61
Unas 13, 21, 29, 40, 46, 51
Unification symbols 6
Upper Egypt 6, 9, 10, 12
Uraeus 6, 20
User-Maat-Re (see Ramses) 36, 79
Ushabti 14, 19, 25, 51
Vulture 6, 20
Wadi Hammamat 3, 6
Wadi 3, 6, 10
Wattle and daub 4, 10
Web 24
Wedjet 23
Weighing of the heart 19, 51, 52
White Crown 6, 10, 12, 13
Yuya 7, 61
Zoroastrian 82
Zoser 11, 13, 40, 41, 43